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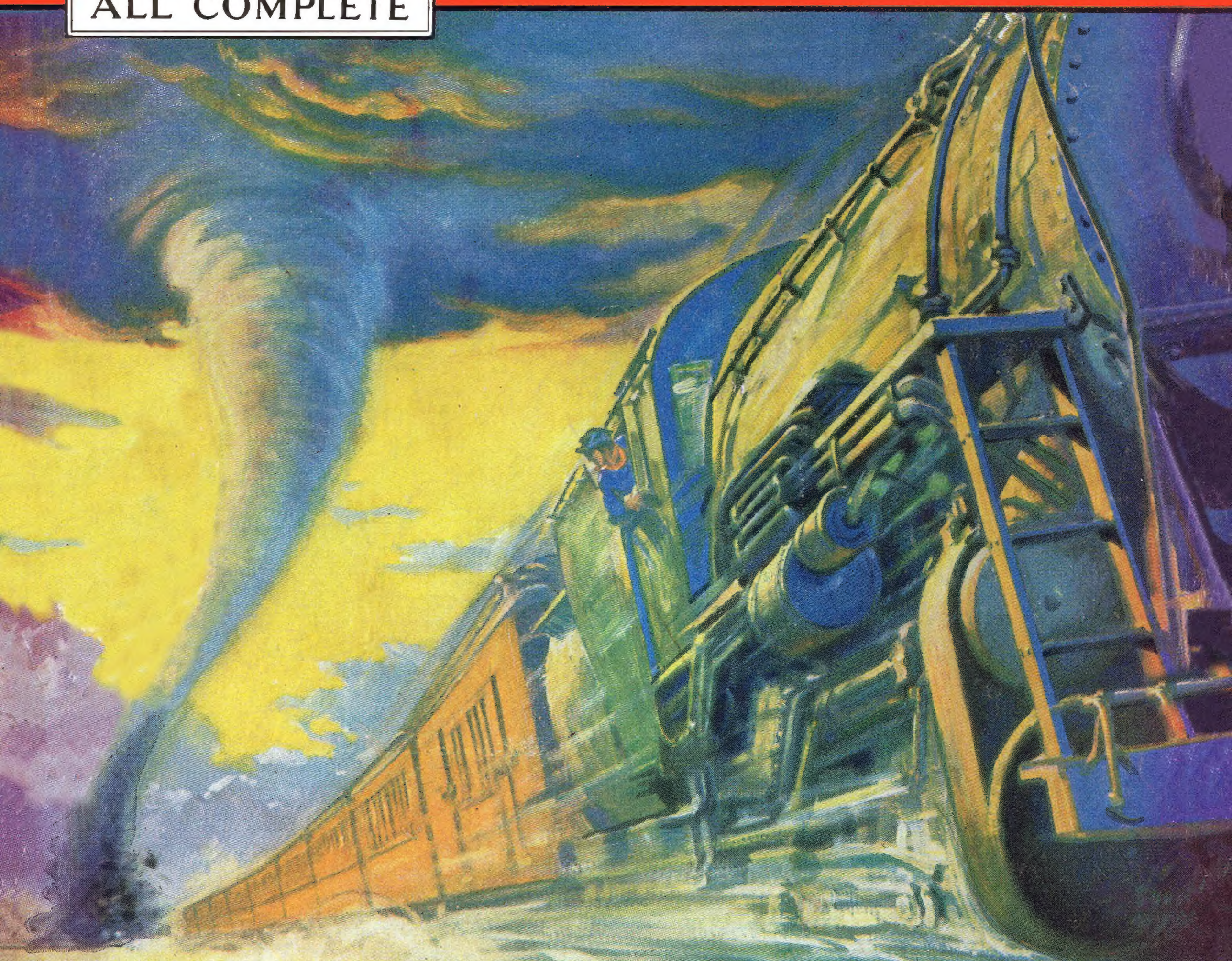
NOVEMBER 15¢

ALL COMPLETE



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by E.S. Dellinger

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• • •

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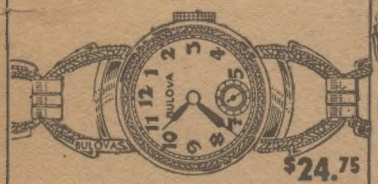

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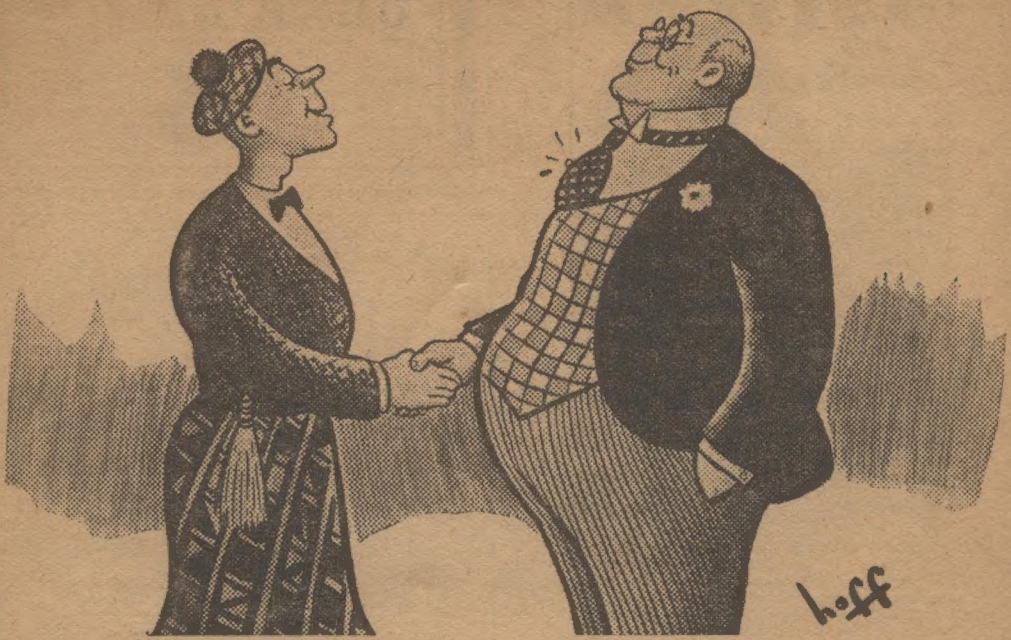

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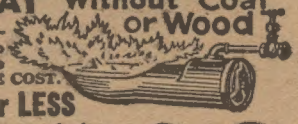

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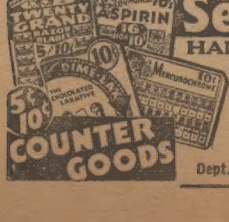

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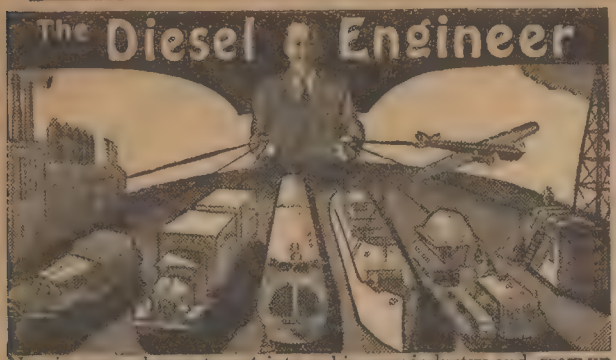

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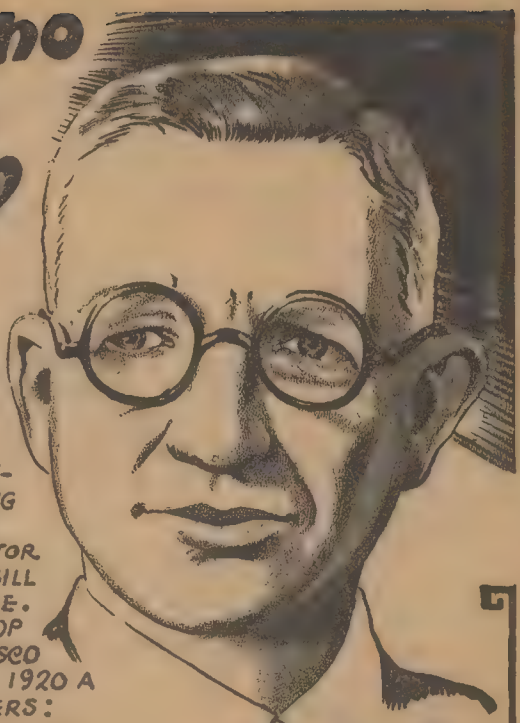
Dr. C. Z. Rendelle

Who's Who in the Crew

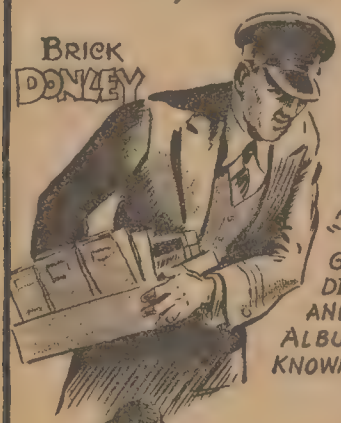
by Stookie Allen



AMERICA'S FOREMOST RAILROAD FICTION WRITER WAS BORN AT NORWOOD, MO., JUNE 1, 1886. AT AGE OF 4 HE TOOK HIS FIRST TRAIN RIDE TO ATTEND WEDDING OF FUTURE MOTHER-IN-LAW. AFTER WORKING AS A GANDY DANCER ON THE "KATY," AND TEACHING SCHOOL, HE GOT A JOB BRAKING FREIGHT ON THE MO. P. THROUGH EFFORTS OF HIS BROTHER, CONDUCTOR BILL DELLINGER. LATER HE AND BILL WENT INTO FRISCO TRAIN SERVICE. BIGGEST THRILL WAS RIDING ATOP A PASSENGER COACH ON THE FRISCO "CANNON BALL" IN 1908. ONCE IN 1920 A TRAIN CREW CONTAINED 4 DELLINGERS: BILL, E.S. AND 2 OF BILL'S SONS.

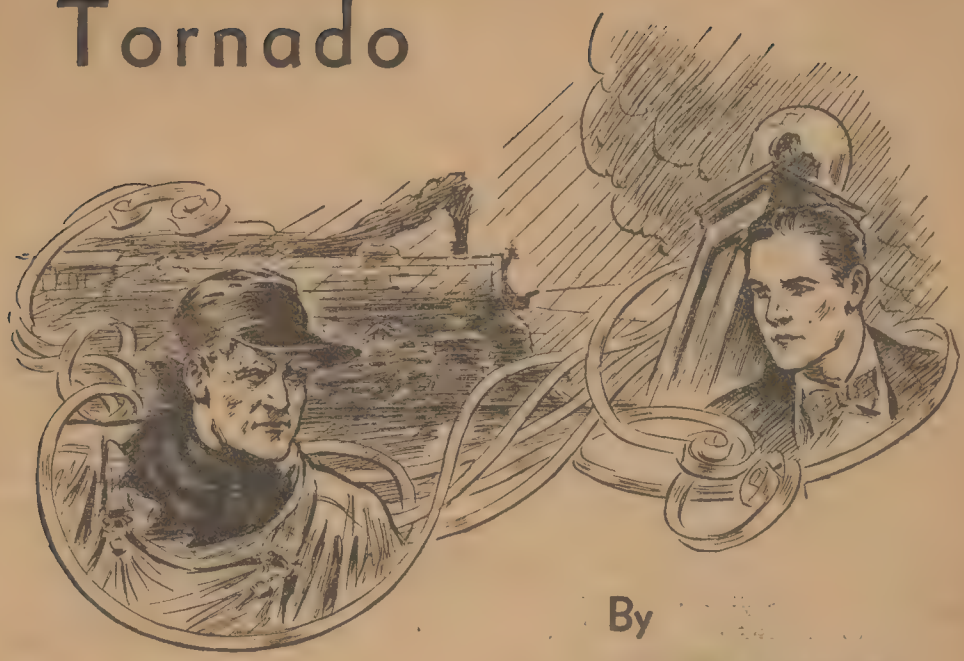
E.S. DELLINGER

E.S. QUIT THE ROAD, GRADUATED FROM NEW MEXICO NORMAL UNIV. IN 1923, AND SERVED AS SUPT. OF PUBLIC SCHOOLS AT SPRINGER, N.M. (1925-33), MEANWHILE WRITING FOR VARIOUS MAGAZINES. MOST OF HIS STORIES ARE NOVELETTES. 50 OF THEM HAVE APPEARED IN "RAILROAD MAN'S" AND "RAILROAD STORIES," BEGINNING WITH "REDEMPTION FOR SLIM" (DEC. 1929). DELLINGER IS MARRIED, HAS A DAUGHTER ROSEMARY AND A SON DALE, AND LIVES AT 1415 E. TIJERAS AVE., ALBUQUERQUE, N.M. HIS BEST KNOWN FICTION CHARACTERS ARE:



Next Month: "Cupid" Childs, N. P. Conductor

Tornado



By
E. S. DELLINGER

The Stock Market Crash That Shook the World Hit Rud Randall, too, but in a Different Way

IT was twilight. A soft south wind carried perfume of rose and lilac through the rambling stone house by the long track switch. From the porch swing facing the tracks of the M. & M. Engineer Rud Randall and his wife watched the new switchlight with its red eye growing bigger and brighter. As dusk deepened a scarlet thread drawn from it to the porch floor glimmered at their feet.

"I wish they had put that darned old thing somewhere else besides in front of my bedroom window," the woman said peevishly.

"Why?" The big railroader chuckled as he asked it.

"Because it gives me the creeps. It looks like a bloody threatening finger pointed at us."

Randall grunted. He knew his wife. She had always lived under the threat of disaster, and had hated and feared the railroad as the fisherman's wife hates and fears the tempest. For fifteen years, while desire and destiny had held him at his throttle, he had futilely sought to allay her fears and soothe her rebellious spirit. He grinned into the crimson eye, laid his big hand lovingly on her small one, and boomed:

"Rats! Quit chasin' shadows."

"They're not shadows, my dear. They're warnings which may at any moment become realities."

"Aw, bunk!"

The porch swing creaked. She left him to join the twins clipping commencement roses. He continued to stare at the long track switch, recently put in to handle lengthening trains, but he was thinking neither of it nor of the scarlet thread drawn from its target.

Running now in passenger pool, he had brought up the Express this morning. With the twins, Ronald and Nettie, graduating from high school, he had planned for months on being home for their commencement tomorrow night.

Consequently, on his way up, he had figured runs; and he knew that his turn, leaving Beulah Bend early tonight, would stand for the "Texas Flyer" out of Darrel tomorrow night. If the Flyer was on time, as it was thirty days out of thirty-one, he would be home by 5.40 tomorrow. He could easily make it to the exercises without losing the day. That, of course, was important; for with Ronald going to college this fall, he knew he would need every dollar he could scrape together.

And Ronald was going. There was no question about it. Coached by his mother, the son had come to abhor the railroad, to feel a sort of contempt for the men who ran its trains. Long ago he had declared: "No railroading for me. I'm going to get an education, go into business, make money, and *be somebody.*"

Randall had not appreciated that attitude. He had always considered railroading more than just a job. Although he had kept his mouth shut and let Molly run the family, it now made him squirm in pain to hear this slim fingered son of his intimating that a young man had to "go into business," and "make money" to be "somebody."

Still, he expected to foot the bill without complaining; and because that bill was going to be large, he had determined to work tonight and trust the timecard, the dispatcher, and a Pacific passenger engine to get him back into Beulah Bend tomorrow night for commencement.

Ordinarily, having decided, he would promptly have forgotten the matter; but ever since he awoke at noon, he had kept saying to himself: "You'd better stay at home, you big ox! You wouldn't take a chance on letting those kids of yours down in the biggest moment of their lives for the sake of twenty dollars!"

THE Flyer whistled for the mile and thundered up the valley. Windows rattled. Cinders rained on the roof and slid off into bowers of blooming rose and lilac.

Rud looked at his watch. It was 7.10. While he looked three distinct thoughts registered in his mind.

"She's an hour and thirty minutes late tonight. It's the first time she's been late for a month. If she's two hours and thirty minutes late tomorrow night, there'll be hell to pay."

He glanced down at his son. Through the gathering dusk, he could see two orbs of blue ice under a broad forehead, and a pair of thin lips tightly clamped together. Eyes and lips made him aware that Ronald had been reading his thoughts, had known what question he had been debating, and had not approved of his decision.

The telephone rang. He knew it was the roundhouse calling him for the "Jayhawker" at 9.05. The inner voice still reproached him: "Why didn't you lay off this morning, like Joe Blanton did?"

It was too late now, though. To

lay off on call would mean more brownies, and he had plenty for one year.

He started inside to take the call. Three pairs of eyes were on him, but it was his son came to the step and called: "Wait a minute, Dad!"

He stopped and looked down. Ronald's face was hard.

"Well?" he said quietly. "You're not going out tonight, I hope."

"Why not?" Rud tried to speak as though he had not been asking himself that question ever since noon.

"If you go tonight you won't be home tomorrow in time for commencement."

"I don't see why. I'll catch the Flyer out of Darrel."

"Something will happen. Whenever you depend on a darned old train to be on time, something always happens."

The engineer almost smiled. For fifteen years that had been one of Molly's clinching arguments.

"You know it," Ronald was storming. "You know it, but you don't give a hang. You'd be tickled to death to be out of town so you wouldn't have to listen to Net and me delivering our addresses. What do you care if we're honor students?"

The engineer's bronzed face colored. For years he had known that this son of his had ignored the real fact that a railroader must be intelligent, clear to think, quick to decide, courageous to act, and had come to believe that all of them were as a lot of serfs working for a slave driver. But to have the brat stand up and tell him!

"What do you care for commencement! For education! For your children or their hopes and ambitions! You roughneck railroaders never think of anything but trains."

Randall's wrath flamed. That kind of talk from a son, even a nineteen-year old one, is not pleasing. Although he had not struck one of his children in years, the impulse was strong to show this smart boy who was head of the family.

But memory is a stabilizer. Memory flashed upon his brain a picture from his own past—forty years ago in Travis Hollow: a hillbilly father giving his overgrown son one last "genuwine good lickin' for sneakin' away to work on a hell-damned railroad."

He had been right forty years ago. He knew it then, and he knew it now. If he had been right then, might not his own son be right now? Instead of striking, he talked.

"Wait a minute, son," he said quietly. "I'm afraid we've kind of got our runnin' orders mixed. Now, maybe your dad is a roughneck railroader. He never went to school because these hills never had much school till the railroad roughnecks brought it in and paid the bill. But that's no sign he's not interested in your future or your commencement. He figures on bein' home for it, and has never counted on anything else."

"You'd better be," Mrs. Randall interrupted.

"I will be, sweetheart. I'll either fetch that Flyer home on time tomorrow night or I'll rick a passenger hog and a string of varnished cars in somebody's blackberry patch." He laughed wholeheartedly, and tried to pass the matter off as a joke.

But Ronald did not seem to see the joke. More was said, and before the argument ended, Randall had advised his son to "read your rules again; and remember this—books and clothes cost money. Remember a roughneck railroader furnishes it for you, and that

he don't make it layin' off. He makes it wheelin' an engine up and down the railroad."

IT was Nettie who drove the engineer to work that night—Nettie, the queenly one with the dark blue eyes and the hair of gold who, since she was sixteen, had had the youth of Beulah Bend at her feet.

For ten years Nettie had been driving him, first in the buggy and later in the fliver. Unlike her brother, she had not come to abhor the railroad nor to despise the men who run its trains. She regarded with a sort of god-like affection this big, blustering father of hers. She knew he had brought in the Brotherhoods, that each year he went away to represent his division at conventions, and that although he had no education, the railroad population of Beulah Bend looked to his cool judgment for advice and leadership.

"If I was a man," she declared, "I'd be a railroader, and it would be my ambition to be an engineer like my dad."

Not being a man, she could not be an engineer; but she had fallen in love with Yardmaster Grigsby's Joe, who fired for her father in passenger pool, and who some day hoped to be an engineer like Rud Randall.

But Mrs. Randall, bound to her husband by ties of love and companionshp, tortured ever by the fear that he might go out and not come back, was determined at any cost to keep her son safe from the perils of the rail. She packed her husband's grip that night as usual. Into it she put the comb, the soap and towels and handkerchiefs and clean overalls and jumper. When she had finished, she unpacked it and went to the closet.

"I'm going to put in your good suit, a clean shirt, and your good shoes," she said, "so if you do get in late, you can come to the church house without looking like a tramp."

"All right, sweetheart. Put 'em in," Rud replied.

When the grip was packed he kissed his wife good-by, gave his son a hearty slap on the back, and said: "Now you go right ahead on that valedictory of yours, and don't you worry but what I'll be on the dot. I'll be there—or out under a streak of varnish pickin' blackberries for the angels."

And with the crimson thread from the long track switch pointing at his feet, he swung gaily down from the porch step, set the grip in the rear seat, and swung up beside his daughter, leaving his wife and his son staring after them.

Nettie drove slowly into town. She was lost in thought. Randall watched her covertly. It was not until they were within sight of the brightly lighted passenger station that she spoke.

"I'm sorry about that dirty crack Ronald made tonight, Dad," she said softly.

"Now don't you worry about that, girlie. Maybe he was right. Maybe I should have done like Jess Blanton did this morning and laid off when I registered in."

"No, he wasn't right."

"Well, he thought he was, which made it right to him."

"I never thought of it that way," she admitted as she stopped the car down by the water plug. Joe Grigsby came out of the crew room with her father's tool kit and his own grip and scoop. Nettie watched him a while, then looked at her father. Her eyes were troubled, and there was a wrinkle in her forehead.

"I—don't like what you said tonight about that blackberry patch. That's been ringing in my ears ever since you said it."

"Forget it. It was only a joke. Just something to say. We don't take fool chances. There's too many lives at stake."

"Then if you get out late, you won't run wild trying to get home in time?"

"Certainly not. Not any wilder than the service demands. If I'm late, you'll understand?"

"I'll understand that you denied yourself the privilege to work for us, for Ronnie and me."

Joe Grigsby came to sit in the car while they waited for the "Jayhawker." It was several minutes late. A wise father who knew when three's a crowd, Rud planted a kiss on his daughter's cheek and sauntered off to talk war with a brother engineer and to speculate on how long Wilson would keep us out of the War.

WHEN the train rolled in he tested the air. The extra conductor in Blanton's place brought a lone running order. A voice cried, "Booooaaaard!" Other voices echoed the warning, and blobs of gleaming metal rose and fell in the sign to go.

Randall and Joe had a good trip down. Their engine was a new Pacific type with an experimental Street stoker, and it burned slack coal. When the coal was wet, the old goose-necked conveyor pipes choked up like a boy eating cold sweet potato, but when it was dry they worked like a charm. It was dry that night. They made up twenty-six minutes out of Beulah Bend and pulled the "Jayhawker" into Darrel at 12.40.

For sixteen years, Randall had boasted that when he hit Ma Shipton's mattress at 1.00 A. M. he was good for sixteen hours without a snore. That morning, however, he was awake with the dawn. Staring over the sultry room with its dilapidated furniture, he wondered what had aroused him, what sound, what thought, what recollection. He looked at the black bag on the stool chair, remembered that his good suit was in it, and that he had a meet with two kids at a commencement exercise in Beulah Bend at eight o'clock sharp.

He did not sleep again. He wondered how the Flyer was coming, whether it had gotten out of Dallas on time, whether it would be laid out before it reached his division.

At 7.30 he went to the yard office. There was no report on No. 8, but No. 4, the local passenger train, was on time. Unable to shake the feeling that something would go wrong with the Flyer, he bantered Red Ellers, who stood for the local, to swap turns with him for this one trip in.

Red said: "Go soak yourself. If you was so cockeyed anxious to be in Beulah, why didn't you stay there last night and give an extra man a trip?"

Randall waked up Joe and they talked about deadheading home on No. 4, due out at 9.50. They agreed that unless they heard from their own run before No. 4 left, they would do so. At 9.30 they went to the office. No. 8 had come on the third district, a hundred and thirty miles away, exactly on time.

"That's O. K.," Joe thought. "We'll make it in all right. No use deadheading home."

They shot a few games of pool and sat on the baggage truck. The sun had gone out behind a blanket of cloud, and the air was sultry. Randall kept thinking about Ronald and Nettie,

and kept hearing a youthful voice saying: "What do you care for us? What do any of you roughneck railroaders care for anything?"

Baggage truck diplomats discussed the War. A married fireman said: "If Uncle Sam gets into it, I'm going to enlist."

A curly headed boomer shot back: "If I had a dame with a tongue like yours has got, I wouldn't wait for Uncle Sam to get into it. I'd go to Canada and join."

The fireman gave him a dirty look, and told him where to head in at. "A lot of boys off this division will go. I know I will," Grigsby resumed the subject.

And the boomer flashed back: "If a dame like that golden-haired queen you was chinnin' last night at Beulah was coolin' her wheels in my sidetrack, they'd have to lasso me an' hogtie me to take me out of Arkansas. Boy, she sure was a peach!"

The roundhouse caller came at 12.10.

"Number Eight on time, Randall. Yuh gittin' Number Fifteen-fifty-four, an' she's goin' through."

The engineer left the baggage truck, cocked his eye at the lowering heavens, and listened to the roll of advancing thunder.

"It's goin' to rain like pourin' gasoline out of holy slippers," Joe prophesied.

"I hope they've got a tank of coal lined up for us in that chute," Rud replied.

There might have been *coal* in the chute, but none of it went into the tank of the No. 1554. The seven tons already there was good stuff, but the five tons the coal heaver poured in on top of it looked like mud off Kansas prairies. Rud and Joe crabbed and stormed about it, but the heaver tartly told them he didn't make the coal.

"Or in Somebody's Blackberry Patch—"

IT was raining when the Flyer stopped at the platform. It was pouring when, a few minutes later, Randall walked the twelve steel Pullmans and the diner out of the yard ten minutes off schedule. Ten minutes did not count for much with Randall. Given a good engine and a head of steam, he knew what to do with them. He made them up in the first twenty miles and went into Ballard killing time. It was on the way from Ballard to Windigo that his troubles started.

The stoker pulled slack out of the bottom of the tank and poured it into the firebox. The conveyor cups crawled up, over, down, under with an incessant metallic click. Jets of steam caught the fine dust they carried and sprinkled it evenly over the surface of the firebox. Rud watched the wet rails race around the Ozark curves to meet him. Joe Grigsby listened to the metallic click, waited breathlessly for the change which he knew was coming.

It came on the heavy grade out of Ballard. The rounded heap in the front end of the tank had sunk to a rounded wall. Rain swishing back from the roof of the rocking engine formed a puddle in the rounded well and wet coal spilled down toward the opening in the tank floor which led into the stoker.

Water reached the conveyor pipes.

Fine dust worked into stiff mud. The metallic click slowed and deadened. Joe went into the deck to watch the peepholes for the first sign of stoppage. The left one filled first, and black dust trickled out of it to fall into the deck. Joe said things, shut off his stoker engine, gouged out the stopped pipe with the iron rod.

Randall looked around and shook his head dubiously. The fireman started his stoker and swung the door to toss in a few scoops of the wet stuff. He could not hold steam. Doors on some stoker engines are not good for hand firing. They are high and small; and the most expert fireman cannot properly distribute coal through them over the large grate area.

For thirty miles the engine crew fought their battle. Randall babied the 1554 along. Joe watched his peepholes, gouging out the stoppage, opening his cleaner doors and dragging scoopfuls of mud into the floor. They lost twenty minutes from Ballard to Windigo. That was not serious. They could lose five times twenty minutes and still get home by 7.30; and they both knew that when they burned out the batch of slack poured into their tank at Darrel, they would find good coal under it.

Nor did they run all that five tons of slack through the firebox. When the stoker was working Joe was in the deck tossing scoopfuls of it into the right-of-way; and when the engine hogged down on the grade to fifteen miles an hour, Randall was beside him, trying to get rid of that slack and uncover the coal in the bottom of the tank.

At Windigo there was a caustic message asking Rud to explain his failure to make the schedule from Ballard to Windigo.

Randall expressed his opinion of train dispatchers in general and this new one in particular. He wrote his answer: "Failed to make time Ballard to Windigo because engines won't run up hill without steam; and fireman can't make steam wth black mud."

He tied the message to a big nut, ready to toss off at Sarvice.

From Windigo to Sarvice occurs the heaviest northbound grade. They hit the foot of it doing thirty-five, with the steam gage down to 180. The hand kept slipping back, and the speed fell off to nothing. Randall whistled out a flag. While Joe turned on the blower and worked the steam up to the limit, the engineer scooped a full ton of Kansas mud out of the gangway. They pulled away from that stop forty-five minutes late, and by then there was good coal going into the stoker, and enough of it in the tank to run them to Beulah.

"We're all right now, boy!" Rud said slyly. "We'll be home by six-thirty."

"Or in somebody's blackberry patch!" Joe snorted.

RUD whistled in the flagman. He stormed up the hill. When he roared into Sarvice he had the high-wheeled passenger engine stepping along at a fifty-mile clip, with the incessant downpour streaming from his window.

But other trains were on the line that day. A freight had left Beulah Bend in the forenoon with a big engine and too many tons. That's the combination that ruined the railroads and left the hole for the busses and trucks to crawl through.

Draft rigging was not built to stand the heavy strain. Men accustomed to handling thirty-car trains did not learn

to handle sixty over night. Some of them didn't try to learn too fast, either. Railroad boys have never loved big engines. Those on the M. & M. were no exception.

They knew that for every big Mikado coming on their job, five good Brotherhood men would walk off of it. They did not shed tears when their big hogs ripped out drawbars and tied up passenger trains. They often yawned, reckoned "the so-and-so's would learn not to try to put all the cars in the world on one train," calmly chained up their bad order car, and took it to a sidetrack.

When the Flyer roared into Sarvice at 4.30 the order board was out. Randall was not surprised. If a passenger engineer loses fifty minutes, the dispatcher usually has him lose some more so that freights can keep moving.

Rud whistled four blasts—whistled long and loud, because it was raining. The board did not clear. He shut off and drifted. The operator in yellow slicker came out with the hoop; and the fireman picked it up. It contained another "make time" message, and a "19" order reading:

No. 8, eng 1554, wait at Vance until 5.20 PM for Exa 3006 South

Randall gave Joe the order and message. He looked at his watch and reckoned they'd be in Vance by 5.10. He did not comment because he was used to getting "make time" messages when he was late, and he figured the freight would more than likely be in the clear when he got to Vance. He hooked the reverse up another notch, tugged at his throttle, wiped his glass with white waste so he would watch the track, and roared on across the flats.

Extra 3006 was the big engine with too many tons. It left Benton at 4.20. The crew expected to clear in Vance by 5.00. But it was raining. Track was slick, coal was poor and wet, and the stoker didn't handle it. They stuck on the grade three miles from town, and lost fifteen minutes raising steam.

The engineer knew if he tried to start his train on that grade he would more than likely pull a drawbar. The surest way out was to double * into Vance. But, according to the Brotherhood contract, when a crew doubled a hill, the company paid them for ten extra miles. If he doubled into Vance, he would have to explain, because officials would certainly accuse him of doing it to make the extra mileage.

Therefore he did not double, but tried to start. The third time he took slack he went forward thirty feet and stopped with the air in emergency. With three long blasts of his whistle, he told the wet hills and the hind men what they already knew—his train had broken.

A brakeman started back hunting the trouble. He was not whistling. Six cars away he found a drawbar, rods, springs, bolts, nuts, washers, and oaken timbers filling the track between two cars of wheat. While he was trying to get the stuff cleared away, so he could chain up his car and drag it into town, the conductor came.

He was an easy-going chap with all the sense of humor which keeps railroad men out of the bughouse. A grin on his rain-streaked face, he stared down into the wreckage, squirted a mouthful of tobacco juice contemptuously over it, and drawled:

"Yuh might as well get yuh a red un off the engine, kid, an' go over to

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** To double a train over a hill is to cut it in two and haul each part over the top separately.*

Vance an' stop Eight. The hind man's gone back to Benton to get Five. We only got three more out between here an' the crummy. Hoghead an' me'll chain 'em up an' bring 'em in. An' just take your time for it. We had plenty of it when we started."

Randall brought the Flyer into Vance at 5.08. Extra 3006 was not there. Forgetful that the new dispatcher did not know he had good coal in the bottom of his tank, nor that he had scooped two tons of slack out into the right-of-way, Rud made nasty comments about a man who would raise hell with an engineer for not making time with a limited train, and then stab the same limited twelve minutes in a blind siding waiting for a freight drag.

WHEN the twelve minutes were up Rud called in his flag and left town. He left plenty fast, because two hot messages, twelve minutes delay, and the recollection that he ought to be going home were prodding him. Near the mileboard he hit a torpedo and picked up a man with a red flag.

"Well!" he bellowed. "I suppose you're goin' to tell me yuh lunged one down on the hill."

"One!" The brakeman spoke sadly, "Brother, we lunged four of 'em!"

"Four! What yuh tryin' to do? Break up the railroad?"

"Nope. Just tryin' to save time an' money an' haul tonnage."

Randall and Joe studied their watches. They did not look at each other. The engineer recalled what his son had said last night about "the darned old trains always being late." He damned himself, the coal heaver, the dispatcher, the freight crew and the company, and he swore again that as soon as he could get enough money to buy that other forty acres he was going to quit the railroad and go farming.

For an hour and forty minutes he stared through dismal wooded silence and listened to the beat of rain on the roof. The crew of the extra brought four pieces of train up the hill. Each time the engine passed, Joe Grigsby shook his fist in mock rage and his brother fireman thumbed a grimy nose.

Randall had pulled into Vance at 5.08. He left at 7.02. It was sixty miles to Beulah Bend, but it was sixty miles of the fastest track in the Ozarks. He had often pulled No. 8 over it in an hour flat. It had been done in fifty-two minutes.

A spark of interest not entirely born of his desire to be in Beulah Bend was in his eyes. He was the kind of engineer who loved the fast runs. More than one new dispatcher who had sent him "make time" messages in the early evening had spent the rest of the night sitting on the edge of a chair listening for a report and fearing it might not come.

The way he whipped those thirteen cars out of siding made Joe Grigsby's eyes kindle. The boiler was hot and full. Joe shouted across the cab:

"Do yuh think we'll make it?"

"Sure, we'll make it!" Randall called back. "Didn't I promise them kids of mine I'd be home by eight?"

"Or out in somebody's blackberry patch?"

Randall laughed heartily. The freight crew who had delayed him locked the switch. No. 1554 poured dead cinders into a wet sky. When the pilot nose passed the fourth milepost the Flyer was doing a mile a minute and gaining more.

At seventy miles an hour he roared

down into Benton. He picked up another "make time" message. Vance was a blind siding, and he had been unable to wire home. In Benton, he tossed off two telegrams, one to Ronald, one to Nettie. Their wording was identical.

Delayed Stop Be Home or Dash by Eight Love Dad

The "dash" was code for "in somebody's blackberry patch." Little did he dream that it would be read by an investigating committee and misinterpreted! He knew his kids would understand. He chuckled when he wrote it. They did not chuckle when they read it at 7.25, in the Methodist parsonage where they were preparing for the processional. They read and talked. Ronald's eyes were hard and cold, and said plainly: "I told you so." Nettie's were soft and wide, and said: "What if he does not make it?"

At 1.50 A. M. another big engine had left Darrel with too many tons. It had made a hundred miles in fifteen hours. At 7.00 P. M. the "hog law" was after the crew. The dispatcher sent them a message to set out their train at Clever, proceed light to Beulah Bend, and run ahead of No. 8 from Clever to Beulah Bend.

The wise crew shoved their train into the passing track, set a few brakes on it, grabbed the caboose, and started home. It had been raining now for six hours. Ditches were full of muddy water, and rivers raced through drains and under culverts.

Without tonnage, the big engine stepped along in fine style. Heavy drivers hammered new rails and caboose wheels beat rhythmic melody. Four miles from Clever their rhythm broke. The right wheels struck four off beats with four successive jars which rattled the zinc wash basin and splashed water from the barrel.

"What the hell was that?" the hind brakeman asked.

"I don't know," the conductor answered.

"Reckon it was a broken rail?"

Three men looked at each other. Flawed steel was the guillotine of the iron road. Many an engineer found the flaw with a flying driver and told the angels about it. Nowadays, science has perfected the rail detector, which, creeping over the line, finds the flaw before the engineer does. The three listened to the rhythmic melody once more resumed.

"If it had been a broken rail," the conductor growled, "you an' me wouldn't be talkin' about it."

"Not unless our hog broke it."

"It didn't. More'n likely a chunk of wood washed over the rail by the water."

But it wasn't a chunk of wood.

RANDALL made twenty-five miles from Vance to Garver in twenty-one minutes. He knew he was running fast, but he also knew he had run faster.

In the Pullmans, passengers who had spent the early afternoon sneering at "this slow train through Arkansas," or boasting about fast ones on the Alton, the Big Four, or the Pennsy, were now keeping discreet silence; and Negro porters assured previously disgruntled ones that "Dey sho does ramble dese jacks down through dese heah hills when 'ey gits 'em a little behind time."

At 7.38, Randall looked at his watch and whistled for Clever. He grinned wisely. He had covered nineteen miles in sixteen minutes.

"We're going to make it!" he

shouted across to Joe, his tallowpot.

The fireman called back, "We may!"

It was growing dark. The headlight gleamed from rail and water. Randall had changed to his good clothes while he waited in Vance, and had put his overalls on over them. Even so, he knew he would have to hurry when he stopped in Beulah. He would have less than ten minutes to get out of his overalls, snatch off the bandanna, wash up and comb his hair, and run to the church.

"Reckon I can do it, though," he thought.

He rehearsed every move he would make from the time he stopped at the station platform until he walked up the aisle. While he rehearsed, he kept his eyes glued to the shining rails.

Like an endless ladder leading from time to eternity, the track wobbled and wove toward him. In the gleam of the brightening headlight, his sharp eye, trained by thirty years of running, picked out every bolted joint, registered every irregularity.

The tracks here were built through a flat valley, over six foot fills and stretches of trestle work set on piling. On both sides the tangled mat of brush and wild rose and wild blackberry briars came close to the right-of-way fence. Remembering his wisecrack last night about the blackberry patch, Rud chuckled softly.

He roared across a long trestle and approached a short one. Light racing along the smooth steel broke in the middle of a rail beyond it, broke like the reflection in a cracked mirror.

Randall forgot his jest. He knew what that break was. Twice on an engine he had seen it. Before he had been crawling. Now he was running seventy miles an hour.

He made two movements with lightning swiftness. His foghorn voice bellowed: "Look out, Joe! We're goin'—"

He did not say where they were going, because one end of the rail went down; and the other, thrust up like the bayonet's point, sent the pilot wheel heading for the tangle of wild blackberry briars with fruit growing crimson among the thorns.

It took time for a conductor to "determine the extent of damage to track and equipment" when a train had hit a broken rail running a mile a minute. It took time for a flagman to walk four miles to the nearest telegraph office to report the accident.

In Beulah Bend time was creeping.

The new dispatcher in his office watched clock and train sheet. At the rate Randall had come from Benton, he should have been in Beulah by 7.52 or 7.53.

At 7.55 the new dispatcher began to squirm, and run a finger under his sweaty collar as if it choked him. At 8.00 he was looking at the hook where three accusing "make time" message carbons laughed at his discomfort. Unaware that there were other reasons, he was blaming those messages for the "time" Randall had been making. At 8.02 he was on his feet, watching down the track for the headlight gleam which did not show.

A minute after that the processional had formed in the parsonage, and the orchestra struck up its slow march. Although they had not mentioned it, Ronald and Nettie knew the Flyer should h a v e been in Beulah and wasn't. They trod uneasily up the aisle behind the principal and the minister.

From their stance in the center of the stage, they glanced over the sea of

faces. Two pairs of eyes found the reserved section, found the vacant chair between Mrs. Randall and Mr. Blanton. It was like a pit full of black shadow. One pair of eyes gleamed resentfully; the other glowed softly.

It was 8.25 when Nettie arose to give her salutatory. She looked down at the vacant chair and out at the door, watching for a tall serge-clad figure which did not come.

When she commenced to speak, the crowded hall was still. No raindrops whispered on the pavement. No exhaust barked, nor bell clanged, nor whistle screamed its discordant note. Her tremulous voice alone trickled slowly into the silence.

She was half through when the cry of the roundhouse whistle came out of the night. Her voice broke. She choked, hushed, continued to the end. She continued but the audience had ceased to listen. N e c k s craned. Women whispered. Rip track men glided out in answer to the call to help man the wrecker.

For more than an hour there was commotion in the rear, suspense up front. Ronald had spent hours and days on his valedictory address; but now his "Pride in Achievement" was gone. His voice showed it. The eyes from which all resentment had faded and in which misery alone was written told too clearly.

In the rear, men who had been out and had returned, looked at him and at each other and whispered: "*How* does he know? Nobody's told him!"

He didn't know—neither he nor Nettie nor Mrs. Randall—and not until the diplomas had been presented and the recessional had been played.

When the wrecking crew pulled Randall and his No. 1554 out of the blackberry patch, the doctors said he would die. When he didn't, they said he would spend the rest of his life in a wheel chair. He laughed at them and told them it took more than a blackberry briar to make an invalid out of a hill-billy.

Because the train sheets showed he had used sixteen minutes in nineteen miles, and because a file had three "make time" messages and a telegram reading: *Be home or dash by eight,* the investigation blamed the accident on "excessive speed resulting in a broken rail."

He stoutly averred the rail had been broken when he hit it, and that fifty miles an hour or seventy would have made little difference in results.

The committee questioned the crew of the light engine. They did not say they *thought* they had run over something, because the committee would have asked immediately: "Why did you not stop to investigate?"

They *knew* nothing. They told what they *knew,* kept out of trouble, and let Randall take the blame.

Because he was Randall and because burned spots of six locked drivers of the No. 1554 and a hundred forty feet of rail scorched blue on top backed up his personal statement, Superintendent Mark Abraham assured him that if he didn't claim damage under the Employers' Liability, his job would be waiting when he was able to return to work. Rud did not put in the claim, not though a lawyer assured him he could collect a cool ten thousand, provided the lawyer got half. Molly told him he was a fool, and brother engineers told him what kind of fool he was; but he held his seniority.

Ronald was at first a penitent son. He said remorsefully, "If I'd kept my mouth shut that night, maybe it never would have happened. Maybe dad

wouldn't have been tearing up the railroad trying to get home."

"It wasn't my trying to get home, son," his father assured him. "I was only making time required of the service. They've hung it on me for fast running, but that wreck was not due to speed. It was one of those things which go with railroading."

"To Make Money—to Be Somebody!"

RONNIE was less penitent after that. He blamed the "old man" for getting hurt and knocking him out of a chance to go to college, scorned the railroad offer of a job firing, and went to work before the summer was over in the Swing River Bank.

That bank job brought changes. It was hard for a youth working with money and securities not to come under their spell, especially if his natural bent is encouraged by a family like the Hepners.

For years Adam Hepner had been the banker. He was a pair of fish eyes, a thin nose above a slit of mouth, a wrinkled piece of parchment on a crooked skeleton, and a huge hairless skull full of greed for gold and cunning ideas on how to get it. Mrs. Hepner imagined herself a social star—and she was, since money alone was enough to make her so.

Their daughter, Luella, who had gone to school with Ronald in "this hick town," and had later gone east, was a composite of her father's ugliness and her mother's beauty; of his greed and her ambition. She had long had her eye on Ronald. That's why he had the chance to go into the bank.

Mrs. Randall thought it was a good chance. "If he works for Adam Hepner and marries Luella, he'll be a millionaire before he's forty," she predicted.

Randall was not optimistic. While he was still convalescing, he warned her to think twice before she encouraged such a course.

"When a young man makes money his god, and marries social ambitions," he said, "he may find himself—"

"He might as well make money his god as to make it an old nasty railroad locomotive," she retorted.

Randall had nothing more to say. He laid off for the church wedding. Ronald and Luella moved into the residence uptown. He made money. Ten thousand out of one stock market deal, twelve thousand from another.

"Didn't I tell you?" his mother crowed. "See how he's going up! Think how much better off he's going to be than these boys who've stayed on working for the railroad."

By "these boys" she meant particularly her son-in-law, Joe Grigsby, who was still firing for Randall, and who was paying for his home and furniture on the installment plan.

Randall let her talk. He knew that even while she was crowing, her heart was an aching void. That boy had always been close to her; yet from the day he married he drifted away. Proud, haughty and selfish, Luella never could "endure those common persons" who had come into her father's bank to deposit their paychecks, who had made it possible for her to wear finery and to move among the best people. She seldom called on the Randalls and Ronald came home less frequently than ever.

In 1920, he went to work for the brokerage firm of Hepner & Co. in St. Louis. After that, although Luella swept once each summer into Beulah Bend to visit the folks, show off her finery, exhibit her little Percy, and draw a big write-up in the social columns, Ronald was not home for more than eight years. It takes time to make money and be somebody.

AT the end of a year, Randall returned to work in passenger pool. He was no longer the lithe giant who had hit that broken rail at Clever on the night of his son's commencement. He was broken and gray now, and his stiff neck and kinked back and hobbling gait made him look ancient.

Folk who watched him climb back into his cab that first night predicted he would not last—never stand a dozen trips, never make the time. But he did. He stayed on, wheeling those fast passenger trains over the iron as fearlessly and perfectly as the youngest man on the job.

The Clever smash seemed to be the turn in the lane. After the war, traffic speeded up. Working hours shortened. Rud used his spare time to read and keep up with politics and progress. He was local chairman of his Brotherhood; and as such helped put through a pension plan on the M. & M.

Without scrimping, he saved. He invested in government bonds—"salting it down" he declared—so that when he was sixty-five he could retire and have sufficient income with his pension to keep him and Molly the rest of his days.

Molly prayed every night for his coming—prayed for it, but expected no answer. Although much of the hazard had gone out of railroading, although the wrecker remained in the yards months on end, although other women had quit worrying about their men coming home feet first on a grain door, she never quit.

That red gleam from the long track switch, pointing its bloody finger through her bedroom window, and along her porch floor was to her a constant reminder that Death still rode the iron.

She scoffed at the idea of his retiring, told him he would never retire until the Great Dispatcher fixed a meeting point with him and Death some night in a broken cab. But he stoutly declared otherwise.

"I'm getting old," he said. "The jar of the cab sends the pains shooting through my joints. And somehow the track and the signals don't come clear like they used to when I was younger. If it wasn't for Joe helpin' me look out for 'em—"

At sixty, five years seemed a long time to go riding up and down the iron, waiting for the years to bring rest and a pension and a cozy nook with Molly in the house by the long track switch, but he reckoned he could stand it.

It was in 1928, the year Rud was sixty, that Ronald came back home. Ronald had made a pile of money. He was trying to make another. Why, heaven only knows, because he already owned a beautiful home, and garage with three cars, and had ample funds to finance Luella, star of the first magnitude, twinkling in the best social set in the mid-western metropolis.

IN fact, it was Luella and her set which brought Ronald back to Beulah Bend.

Purple Lake had been created by damming an Ozark Valley in the hills north of Darrel. All Luella's set were

taking lodges on exclusive Lakeside Beach for a summer colony. Luella insisted that they, too, must have a lodge at Lakeside, and Ronald went down to buy it.

Although he had long since forgotten that his father's birthday was in September, or even that the "old man" had a birthday, he decided to stop off on the way back and see the folks. He wrote his mother on September 10th, that he would be home on the "High Brow" at 6.50 on the evening of the 16th.

She was all excited. Because she had remembered Dad's birthday, she thought he had and was coming for it. She rushed madly over to Nettie's (Nettie was her main anchor now) with the glad tidings. Nettie was excited, too. With a millionaire brother coming home for the first time in eight years, she had a right to be.

They set their heads working. They determined to have a big time with the Grigsbys and the Blantons and other old-timers in for a birthday supper. They agreed not to tell Rud about it, to spring it as a surprise. Joe figured their turns, and three days before announced that, barring a deadhead crew or a second section, things were going to work out exactly, for Randall would stand on the evening of the 16th for the "High Brow," the very train Ronald was to ride home.

The evening before, however, someone remembered that the sixteenth was Brotherhood night. Often Rud had a

"Why Don't You Ride the Engine up with Me, Son?"

lunch uptown on Brotherhood night and didn't come out until after the meeting. Since that would never do, Molly told him before he went out, told him Ronald was coming home for his birthday.

He felt more than a glow of satisfaction. He thought it was little short of marvelous that this rich son of his should remember his birthday after all these years.

"Maybe getting rich hasn't hurt the boy so much after all," he thought. He was still feeling a little soft about it the next evening when he went down to the station in Darrel.

The "High Brow" pulled in exactly on time.

Rud and Joe took over the engine when it stopped at the water plug. While passengers paraded up and down the brick walk, the twisted engineer oiled and groomed the shining Pacific, keeping one eye cocked for Ronald, because he had tipped a redcap to tell his son who was running the engine.

Air pumps chugged. Steam whined and oozed from pop and whistle. Rud kept looking for Ronald, but his son was not among the passengers. He went disappointedly on with his task. When he was halfway through, he felt a touch on the shoulder. He revolved slowly and looked up. Ever since he had been hurt, he had been compelled to turn slowly and to look up to instead of down on the rest of the world.

Ronald in tweeds and cap was smiling down. The engineer set his oilcan on the side-rod and said, "Well—well! I'd just about give you up!"

"We had a flat," Ronald said sharply.

"A flat?" Rud looked puzzled. He had never heard of the "High Brow" having flats.

"Yes. I was up at the lake and drove down to catch the train."

"Oh, I see!"

Randall wiped his hands on white waste and they shook, shook a long time. Conductor Blanton brought the orders, and they compared watches.

Ronald said, "I guess I'd better be getting back to the car if I'm going to ride this train north."

"Oh, there's no hurry," the engineer assured. "I won't pull out an' leave you."

They both laughed and Jess Blanton laughed with them. When they had read orders and compared watches, Randall looked at his son again, a quizzical light in the fading eyes. He was remembering that Ronald had come all the way from St. Louis because it was his birthday.

"Why don't you ride the engine up with me, son?" he queried almost wistfully. "You never did ride a cab with your old man like the rest of the boys around here."

Ronald did not say that the reason he had never ridden the cab was that he had never cared to do so, that he had been taught to believe that engine cabs were dirty, smelly places where grinning Death stood at the rider's elbow. What he said was: "It would not be permitted, would it?"

He looked quickly from his father to the uniformed conductor, and there was an anxious note in his voice. Randall mistook the anxious note. He could not understand why a cab ride would not be a treat to any layman. He chuckled wisely.

"It's not supposed to be done without a permit, my boy, but we're not hauling any brass hats today. Are we, Jess?"

He winked at Blanton. The conductor guessed they weren't.

The young millionaire flashed two dark blue eyes toward the shining coaches. Then he looked down at his tweeds, already slightly soiled from the day on the lake.

His father misread both signals

"Joe's got a suit of unionalls," he boomed. "The porter will look after your baggage. Jess will see to that. Eh, Jess?"

He slapped the conductor good-naturedly on the back, and Blanton said he would.

EIGHT years is a long time to remember a face and figure. In eight years, Ronald had forgotten how his father had looked after the Clever wreck. He had been remembering a much younger man, much less stooped and gray. He felt a strange sympathy surging through him. Unable to think of another plausible excuse which would not hurt deeply, he accepted the invitation and climbed into the cab.

If Molly had known, she would have been frantic. She would instantly have jumped to the conclusion that with her man and her boy and Nettie's Joe all in one engine cab, Fate could never pass up the chance to ditch the "High Brow." But Molly did not know. Molly and Nettie were baking pies and cakes and roasting a turkey in the house by the long track switch.

That cab ride was a thrill and a revelation to Ronald. He had always considered railroad men a dumb lot who ran trains and engines because they had not brains enough to do anything else. Before he was out of the yards, that idea was knocked cold.

Joe turned oil jets with gauntleted hand, sprinkled sand on burners, touched a valve here, and a gadget there. His father manipulated throttle, reverse, sand valve, brake valves. By the time they passed Darrel yard limit, thirty years of contempt had given place to a feeling of respect. Ronald was even thinking.

Rud called him over to the post of honor on the cushioned seat. Speed came rapidly. The exhaust was a volley and then a stream. Explosive light flashed through the firebox and played at his feet. Side-rods rose and fell with a steady hum. Soon they were doing a mile a minute.

Ronald reflected that he had often done a mile a minute in his car; but a mile a minute in a small machine under one's own finger tips is vastly different from the same speed on one of these thundering Pacific oil-burners, with a half million pounds of wheels and rods and bars and bolts

He recalled things which had happened around a railroad, those tales his father used to tell about wrecks and fast ones. Vengeance Hole, where the earth went from under pilot wheels and put an engine into a sinkhole; the mad race with a wrecker to the circus smash at Green River Bridge; the wild run through the flooded valley with medicine the time he and Nettie had typhoid. Then there was that Clever affair, twelve years ago. He had tried to forget that and the dirty crack he had made that night.

They hit the first curve. The Pacific swayed gently, leaned far to the left. Ronald caught his breath and cleared his throat and clutched at the arm rest, wondering how this thing ever stayed right side up.

His father touched his shoulder lightly. "Now don't you be a bit uneasy. There ain't been a bad wreck on this road since I turned Eight over up by Clever twelve years ago."

The white flash of a station mile post—a long blast from the whistle—

a dinky little Ozark town with a cordwood yard, and a tie pile, and a handful of station loafers racing toward them.

"Nothing ever happens here anymore," Rud went on. "The danger's all gone—look out for that mail crane, son."

The warning hand on his shoulder tightened. The young millionaire jerked his head back inside the cab. Two ugly spears on a heavy post with a pouch suspended between them swished by scant inches from his nose. He shuddered. Suppose a man forgot one of those things?

"You want to keep an eye out for them babies today. They're bad medicine. Now as I was saying, nothin' ever happens on this pike anymore. We've got a rail detector that finds the broken ones. We've got block signals that keep us from gettin' together when we overlook our orders or forget to flag. We've pulled out all the weak drawbars and cooled all the hot boxes so we can keep on time."

Another flash of white—another long blast from the horn whistle—another little Ozark station with its handful of loafers, its mail crane, a Decapod and a mile of freight cars in the siding—all rushing through the glimmering haze.

"Not a particle of danger anywhere—I wouldn't keep my head out of the window runnin' by this drag. Might be a reefer door open, or a loose board stickin' out. Not a particle of danger in the world. Railroad man's life is just as safe as a farmer's, an' a lot safer than a pedestrian crossin' a street with all these here automobiles honkin' at him. No sir! Not a particle of danger in railroadin' these days."

Shouting above the roar of exhaust and firebox, and the din of whirling drivers, they talked on. They passed Ballard and Windigo and went up through Sarvice, racing along the shores of Purple Lake, created to furnish electric power to the region.

The engineer said they were certainly building things up around here now. His son pointed out the lodge he had bought, "That white one trimmed in green with the garage, under the three pines."

They discussed the new highway, "just graded, not even graveled, but wait five years. Five years from now it will be paved with asphalt and wide enough to carry four cars abreast."

Through Vance they roared and down Benton Hill—eighty miles in a hundred minutes and came finally to the fifty-five mile stretch of valley leading up to Beulah Bend.

"Too bad we're not a few minutes off, son," the engineer boomed. "I'd like to show you some fast running over this stretch."

Ronald did not say he was running fast enough. He said reproachfully: "Do you try to make up time with these fast trains?"

"We don't try," Randall chuckled. "We make it. When they're off time, seventy or eighty miles an hour is our meat. Five years from now, ten maybe, there's be regular trains doing a hundred or more on schedule."

"There may be."

"There will be. A hundred miles an hour is no speed." Then, after a pause: "I reckon I won't be railroadin', though."

"No?" Ronald watched the stream of cars flowing along the highway, their lights glowing dully in the early dusk.

"Nope. If nothing happens, I'll make my last trip five years from tonight." He sighed, either from weari-

ness or regret. "My days railroadin' are about done. I've known it a long time. Been savin' up my money and saltin' down so I'll have a little interest comin' in all along."

Ronald did not comment. He wondered just once if the old man could be hinting for a handout. Then he knew better.

FAR ahead car lights were crossing the track, fireflies crawling up and over. His father whistled again, long and loudly, kept the whistle going until they ran over the crossing.

"Afraid of hitting somebody?" Ronald asked.

"Never know when a fool will try to beat me to it."

"That's true."

The son watched the car lights, and another light, a yellow one higher than the others. The engineer appeared to be watching it, too; but he started when Joe Grigsby shouted:

"Forty-five!"

He started and called back his echo, "Forty-five!"

The yellow light came close, flashed by on the right, the golden ball of a block signal disc at caution. Randall sent the music of his silver horns ringing through the valley.

Drivers swallowed another mile of steel. The engineer studied his watch; Ronald studied the pattern of lights.

"How could you tell one of those car lights from an engine headlight?" he queried.

"Oh, we've quit worryin' about engine headlights. You see the block signals protect us. When there's another train in the block they show red."

"Oh. I see."

Other car lights streamed on, and a crimson one stood above them like a beacon. Grigsby's voice called:

"Red board!"

"Red board!" the engineer echoed.

Ronald stayed on the seat. He was nervous. His father cut off the throttle, set the air brakes; Joe screwed down the oil feed, turned on blower and injector, came across the cab to watch the red light drift up close to their smoke stack.

"Wonder what's wrong?" he bellowed.

"No tellin'. Dumb trainmaster pullin' a test, maybe; or maybe a block out of commission."

He whistled for a flag and waited. The board did not clear.

"No test," he concluded.

The porter came by with a white light and a red one and started walking up the track. Rud waited a few minutes, called in his flag from the rear, and started following the porter at five miles an hour.

"I reckon we'll have some time to make up all right when we get by that next block," he said with a chuckle. "Ever notice how luck usually plays into a man's hand to give him what he thinks he wants?"

Ronald had noticed that. He noticed also that they gained speed quickly—too quickly—when they had passed the green block and picked up the porter. When they went through the next town they were doing a mile in forty-five seconds, making up the time they had lost flagging that block.

They roared on, shuttling between thickets of blackberry briars whose fruit had long since fallen, booming over trestles, thudding over fills, crashing through cuts. Sitting behind his son, Rud had his head thrust from the window, ever alert, watchful.

He saw Ronald gripping the arm rest; but he did not know the son was wondering if speed "ever makes the

old man nervous." The Clever mile post flicked by. Randall whistled, and when the horns quit vibrating, shouted:

"I'll show you where I turned Number Eight over up the other side of that long trestle."

Between the long trestle and the short one, the highway department had put a grade crossing—not only a crossing, but a wig-wag with a bell and light in it. Running a mile in fifty seconds, Rud brought the "High Brow" toward that crossing. His hand was on the whistle cord, and the four horns were blasting in the dusk.

At the crossing a light went up and over; and another light came on behind it. This light should have stopped, but did not. Ronald leaned back and sucked in his breath. The gleam tilted up. The engineer let go the whistle and grabbed the brake valve. The light leveled off and when the headlight fixed upon it, a white face showed in the window of a maroon sedan. The face of a child, a face full of horror.

The young millionaire covered his hands because he could not look on death. His father ripped out on oath and jerked him off the seat into the deck. A scrap of metal as big as a cannonball hurtled through the cab window, and dented the steel frame squarely back of the spot where his head had been; and a terrified scream and the rattle of shattered glass rang above the din and jar of the engine.

When the Bottom Fell Out

THE "High Brow" was an hour late into Beulah. At the house by the switch, the company fidgeted and tightened belts; victuals cooled off; and a woman with hair of white gold kept going to the window to wonder what on earth had happened. When at last the "High Brow" whistled for Beulah and blared over the switch, she gave a sigh of relief, quit fidgeting, and commenced to rave.

"Just like a darned old train. When you want it to be on time, it's always late. That thing hasn't been five minutes off in over a year, but because we're having a birthday dinner—"

Conductor Blanton's wife agreed she was right.

Randall, his son, and the fireman left the engine at the water plug for another crew. Nettie was waiting for them with the flivver.

Ronald looked like a seasick maiden. He kissed Nettie and croaked: "Sis, you're getting fat."

Joe said nothing. He kissed his wife, got under the wheel and drove the party to the big stone house where lights burned in the windows, and guests waited for a cold supper.

When the company had gone, the family sat on the east porch. Randall was not talking. He was wondering how much longer fools would continue to drive cars into speeding trains.

Molly was not talking, either. She was shivering inside and wondering how in the world the Fates ever managed to pass up this chance to wipe out the men folk of her family in a railroad accident.

Ronald was silent too. He was watching the scarlet threat drawn from the long track switch pointing like a bloody finger at his very feet. He recalled his father's declaration: "There's no danger in railroading now. Not a bit in the world. Nothing ever happens." A smile came over his face as the irony of it struck him.

Ronald had expected to return home on an early morning train, because he felt that he could not let one day go by without adding more dollars to his million. Instead of going early, he remained a whole day with the folks. That was longer than he had been with them since he had married.

Although he and his father had never been close, as father and son should be, there seemed now a new bond between them. Possibly it was that understanding which had come to the son with age and responsibility. It might have been that cab ride, and the utter weariness in the twisted figure after that crossing hit. Maybe it was the realization that his father's life was fading rapidly into the sundown years.

THAT afternoon Ronald called his mother and Nettie aside and talked to them. Mrs. Randall's eyes kindled anew with hope and enthusiasm.

"It would be noble of you, Ronnie," she gushed. "It would be splendid. But I doubt—"

"Put it up to him," Nettie suggested. "He can't do more than turn it down."

She brought her father. His agitation of the preceding night was gone, and with it the utter weariness, and he was again his old joking self. During the one uncomfortable moment, he frowned upon his wife and children with mischief in the eyes whose corners were marked with crows' feet—crows' feet caused by years of squinting into distance.

"Well," he demanded. "What's this? A holdup or something of the sort?"

"No. No holdup, dad," the son said quietly. "I've got a proposition I want to put up to you."

"I'm listenin'."

Very briefly Ronald outlined his plan. The engineer was to give up his job on the road, and Ronald would provide for the family.

"Now that's nice of you, boy," Randall said huskily. "It's mighty fine of you, and I sure do appreciate it. But—" He hesitated, as if hunting for an excuse. "Why, I just couldn't think of it. You know I've always made my own money. I'd never feel right livin' off what somebody else gives me. Be too much like acceptin' charity."

"It wouldn't be charity, dad," Nettie urged. "Think of it as the payment of a debt, the debt a son owes to his father."

The engineer shook his head. "I couldn't do it. It's only five more years till my pension's due. I'll work that five years, an' with what we've saved, we can live on in peace and comfort, your ma and me, knowin' it's all ours and we've worked for it."

"I might have known you wouldn't do it," Molly said bitterly. "You're just too stubborn and bull-headed and too eternally glued to your old railroad. You're afraid you might get lonesome if you had to stay home with me for a few nights instead of running up and down on a dirty engine."

There were other arguments. The engineer vetoed them. When it became plain that nothing would cause him to accept the gift, Ronald had another proposition.

"Let me take that money you've got in bonds and invest it for you. It's not earning you much where it is. I can double or treble it for you in a year."

"How?"

Ronald explained how his company handled many accounts for out of town

customers, buying and selling in the stock market.

"We make money for them, too. Plenty of money. We're on the inside, and with the six thousand you've got tucked away, you can be independent by nineteen-thirty. You can retire at sixty-two instead of sixty-five and have more income than your pension would ever give you."

Randall hemmed and hawed. He had never done much gambling. His poker playing had been for the fun of it rather than for the few dimes he raked in from the table. Might not the money get lost in the market?

"Not the least danger in the world, Dad. I've been in the game for eight years. I know my business. Do you think for a minute I'd be advising you to put it in if I wasn't sure it was perfectly safe?"

Randall didn't think that. Whatever qualities this son of his might have, he was as honest as the day. The old engineer knew it. He also knew that although just at the moment he would be lost without a job, the time might shortly come when his eyes or his rheumatism would crowd him out. There were days even now when he had to drive himself down to the station to take out his engine.

He hemmed and hawed. Ronald assured. Nettie urged. Molly argued. Finally he agreed to the proposition, surrendered the six hard-earned government bonds, instructed the son to handle the proceeds for him, and went on railroading.

The report which came from the brokerage firm in January, 1929, was highly gratifying. Their dollars had attracted other dollars to them. Ronald wrote personally that results had been beyond his expectations. The six thousand had grown to eight.

The April report was even more gratifying. The eight thousand had grown to ten, and by the July report, the ten thousand had become twelve.

Molly crowed and said, "I told you so!"

It was after this July report that she began urging at him to quit his job right now. "Quit this year instead of next. There's no use your going on working. Ronald has made your money earn more for you in ten months than you've earned working in ten years. Quit and get out of it."

Rud promised and put her off, said he'd quit when cold weather came—afraid something might happen—feeling good now, anyhow—wait till November.

"Yes, and when November comes, you'll have another excuse. I know you. I've been watching you for thirty years, and every time it begins to look like you could quit and take it easy, you begin figuring some other excuse to stay on."

AUGUST. Bottom falling out of the world. Unearned fortunes crumbling. Glaring headlines telling how paper values were going in the deluge of panic. The tornado had struck.

In the very first days of it, before men caught an inkling of final consequences, Adam Hepner was annulled, and the Swing River Bank went into the junk pile. Ronald and Luella came home, and Ronald rushed back with little more than a word to his parents. Luella did not go back.

The old engineer and his wife worried. The life savings were in the market. But where, and in what stocks, they had not the remotest idea. They had left everything to Ronald. He was the financial wizard. It was

his genius which was to make them wealthy. Everything was in his hands.

Everything was in his hands, but he did not write. A week passed, other weeks, and the only word they had was that which a frantic Luella grudgingly gave—he was well.

Mrs. Randall lost her appetite; her hands grew trembly. Rud urged her not to worry.

"We'll be all right. I've still got my job."

But she refused to be comforted.

Then on his birthday, an exact year after he and his son had ridden the cab together, Ronald came home. Although he did not see his father, Rud saw him, driving down main street staring straight ahead like one in a dream.

Rud had the flivver parked in front of the roundhouse. He got into it and drove home. He did not tell Molly their son had come. She would know it soon enough, too soon. They sat in the old porch swing staring out across the wild sunflowers which covered the bottom, out where the switch stand stood like a sentinel of the rail.

A long time after he had gone home to Luella, Ronald came to them. They heard him stop, heard the car door close, and heard his faltering step in the driveway.

"Ronnie!" Mrs. Randall whispered.

Rud nodded. "He's come."

She stumbled to her feet and tottered out to meet him. Old Rud, his bent figure as straight as he could rear it, followed. Son met mother on the flagstones. He kissed her, but there was no warmth, no life in his embrace.

Solemnly he shook his father's hand. The engineer asked no questions. He did not have to. The haggard face, the downcast eye, the fringe of gray at the temples, the nervous lips which had once been cynical told their own story.

It was Molly who queried: "How —how are you, Ronnie?"

Ronald drooped like a chocolate baby in a hot window. He stared long across the familiar bottoms where at night the red light from the long track switch had pointed its threatening finger. He licked his lips thrice before he croaked:

"Broke. Cleaned out! My money — Luella's money — everything gone but Lake Haven Lodge and the car, and they're both mortgaged."

"But our money! Our money!" There was appeal in his mother's voice, and there was despair and reproach.

The engineer gripped Molly's shoulder. She turned and stared, but she did not see or did not understand the warning shake of the head.

Then Mrs. Randall wept copious tears of bitter disappointment. She sobbed out her grief:

"All gone! All gone! And your poor old father—"

If the son had only looked then at "poor old father," looked with eyes which saw, he might have been spared his keenest heartache, might even have averted the thing which happened in the murk of that storm-racked night. For instead of reproach and grief and disappointment, rejoicing was written on his wrinkled face, and the eyes which since July had been growing ever dimmer, were now brightening.

He tried to tell them.

"Now don't you worry about it, Ronnie. Sweetheart, we'll be all right. We've still got the home. I've still got my job. I'll go right on railroadin'. We'll go right on livin'."

RONALD returned to Luella. She was full of hysterics. The fact that her father had lost his million and

wrecked a bank in the first crash, the fact that older and more experienced men than her husband had lost *many* millions instead of one was no excuse.

He started the argument by talking. That's the way all arguments are started. He said how sorry he was for his old folks. She couldn't see why he was so worked up over them. *They* had lost "only a *paltry* few thousand, while *we* lost a cool million." He retaliated, and she returned the favor. By that time she was going good.

She whined and whimpered; she stormed and accused and upbraided. Why hadn't he had sense enough to pull out before it was too late? What would their friends say?

If Luella had taken a peek into the dark blue eyes when she asked that question, she might not have asked another. She might have dropped a word of sympathy, or laid on a nerveless arm the hand of understanding. She did not see. She kept raging.

Ronald stalked out to the garage. He puttered about the mortgaged car. He started the motor and going around, looked behind at the exhaust pipe. Colorless gas was coming from it.

He looked at the pipe and at a piece of garden hose on a hook on the garage wall. He cut a piece off the hose, attached it to the pipe, wrapped about it a scrap of inner tube, brought the short hose back through the lowered window, and started the motor again. He watched dust particles dart up from the seat cushion. It worked!

Coiling the short hose under the seat, he hung the long one back on its hook and went into the house to supper.

The meal was gloomy. Mrs. Hepner could never understand the dumbness of business men who lost fortunes and left their families penniless. Why hadn't he used his intelligence and salvaged a little—a quarter-million at least?

Ronald had wondered about that himself. But it was too late now. In trying to save all, he had lost all. The only thing now left was life insurance. That would keep Luella and the baby for years, keep her until she could find another fool. It was foolish, of course, but that's the kind of reasoning which ran through many a head in those days.

Supper over, he wrote a note and tucked it into Luella's purse where she could find it in the morning. Then he got into the car, backed out of the garage, and drove down the street.

"Going off to sulk, I presume," Luella said spitefully.

"Or down to wheedle sympathy out of his mother," added Mrs. Hepner.

But Ronald was going neither to sulk nor to wheedle sympathy—at least, not any he ever expected to know about.

It Takes a Storm to Clear the Sky

OLD Rud and Joe were standing that night for the "Jayhawker," due out at 8.30. Not wishing to leave Molly alone, the engineer went to ask Nettie to stay with her. Nettie and Joe drove over after supper. When the children were in bed, they all sat on the east porch watching the switch light brighten out of the fading day.

Joe and Rud talked about the bass striking on the lake, and that little cove down behind Lakeside Beach where the big ones were. Rud started to say that Ronald was going to lose Lake Haven along with the rest of it.

They turned to talk about the storms which had been tearing up the country, how that wind yesterday had wrecked every telephone line from Benton south for a hundred miles, how the water had cut that new road to the lake all to pieces.

" Takes four hours to drive it now, and it'll take a lot longer than that if it rains. It sure looks like it might come a regular gully-washer tonight, the way that cloud's rising out of the southwest."

" Yep, it sure does."

From roads they turned to talk about automobiles, how many miles they got out of a gallon, how much better the new models were than the older ones. Rud said he had intended to trade in this fall, but he reckoned now he would drive the old mill another year. That was as near as he ever came to mentioning their lost savings. Molly never mentioned them, either.

Joe called up the roundhouse to ask when they were getting out. The roundhouse didn't know, for the " Jayhawker " had had engine failure on the first district and would be at least two hours late. They might as well go to bed and get some shuteye.

They didn't go to bed. About 7.30 a car came down the highway. They all heard it come and stop in front of the house. Knowing it was a big car, they thought it might be Ronald. Nettie went around the house to see, but when she came into the light, the driver stepped on the gas and went purring slowly southward toward Purple Lake.

Nettie returned to the porch. They watched the lightning reflected against trees on the valley wall. The cloud rose, erased stars from the zenith, crept east toward the bluffs. At 9.40 the men were called for 11.00, and Nettie drove them to work as she had been doing for twenty years.

Up at the Hepner place, mother and daughter spent the next hour consoling each other on the dirty deal they had drawn in life.

Mose, the colored chauffeur, put the poodle to bed and started home. Mrs. Hepner instructed him to water the lawn before he left. Mose thought the lawn " Gwine git all de watah it need fo' mownin', kase it's sho' gwine ter rain."

She told him to water it anyhow.

Although Mose had not had a payday since " ' Fo' de bank wen' bust " he started for the hose.

A long while afterward he came back to report.

" Miz Hepnah, somebody done cut 'bout ten foot off'n 'at hose, an' dey ain't 'nough to reach no place!"

" Cut it off!" she exclaimed. " I dare say you did it yourself."

" No, Miz Hepnah. Hones' I didn'. I spec' Mistah Ronal' done it. I found dis heah on de g'rage flo."

He brought Ronald's pearl-handled knife to Luella. She shrugged her shoulders, took the knife, and dismissed the servant.

Two hours after Ronald had gone Luella was wondering where he was. He seldom remained away from her for long at a time. Mrs. Hepner was saying that she thought the proper place for a man at a time like this was at home with his wife.

Luella thought so, but she did not say it. She was too uneasy. Much as she worshipped wealth and power, her husband was the big god of her trinity, and her wrangling with him was by no means due to lack of love.

When he had been gone two and a half hours, she called his mother, intending to order him home imme-

diately. No use his staying down there with "those persons" all night. She called. Nettie had gone to the station with her father and Joe.

"I want to speak to Ronald, please!" Luella's voice was tart.

"Ronald is not here," Mrs. Randall answered coldly.

"Hasn't he been there this evening?"

"Not since four o'clock."

Luella hung up. She toyed with the pearl-handled knife. She wondered if it were connected with his absence. She took it upstairs, opened her dresser drawer, changed her mind and opened her purse.

In the purse was a scrap of paper which had not been there when Ronald had given her their last hundred dollar bill four hours ago. Casually she opened it and read it.

My Darling Luella:

My will and policies are in my black brief case. Send a hearse to the garage at Lake Haven when you find this. Kiss little Percy, and tell Mother I have gone where I will bring no further suffering to those I love. Good-bye!

Luella screamed but did not faint. Her mother came up the stairs. Luella wrung her hands and cried: "What will I *do?* What *will* I do!"

Although the invisible fence had kept the hardware merchant next door off the Hepner estate, the merchant, hearing her scream and other screams, ran to investigate. He thought the best thing to do was to "Go tell Old Rud Randall. It's his son, ain't it?"

He ran out his car, and Luella fell into the seat.

NETTIE had come home because it looked like rain. She and her mother were preparing for bed. She caught Luella stumbling through the front door and supported her while she showed them the note and sobbed.

Mrs. Randall cried pitifully. Nettie didn't sob. She had a head which did not go to pieces when it got a shock. She used it.

Her first guess was that Ronald had cut the garden hose to carry gas from his exhaust pipe into the sedan. Her suggestion was to call a constable in Purple Lake. Then she remembered that telephone wires were all down into that country.

Her second impulse was to telegraph some station down the line and have a car go to Purple Lake. She could not do that, because Benton was the last open station with an automobile road out of it; and he would have been through Benton long ago.

She acted on the third impulse. She called the dispatcher, told him she wanted her father at once. But she was too late. Her father had already walked the "Jaywalker" by the office, heading for Darrel.

Nettie ran to the porch. A headlight was glowing and an exhaust was rapping the night as her father whipped the oil burner, getting up speed for a record run.

She knew unauthorized persons had no right flagging trains, but she had to flag this one. Leaping to the yard, she raced to the fence, tearing half her clothes on barbed wire, and stumbled onto the track waving her apron.

Unaware that she was not yet visible, she wondered if her father's failing sight would see her. She saw the light on the long track switch. It was showing green along the rails, and red to the sides. She knew the trainmen flagged with red ones. She jumped on the switch stand and snatched away the lamp, fell back into the track, and waved it once.

Wondering what lunatic was monkeying with that switch, her father was alert, ready to stop. He answered her signal. Then he recognized her, stopped the engine, came running back, Joe at his heels.

By this time, Luella and Mrs. Randall were there. Luella gave Rud the tear-stained note. His face was hard and he muttered a " damn!" or two.

Although Luella had never before touched or spoken to him as if he were anything other than the dust beneath her feet, she threw herself upon him, imploring him to " Do something! Oh, do something!"

Randall did not tell her what he was going to do, nor Mrs. Randall either. He told Nettie to get them back into the house and keep them there, and that he'd wire from Windigo. He told conductor Blanton to have a doctor ready at Purple Lake if there was one on the train.

To Joe he said: " We had orders to make time when we left the depot. We're goin' to make up a *hell* of a lot of it between here and Purple Lake."

NETTIE steered her mother and Luella back to the house. For the first time since that night thirteen years ago when her father had put the " Texas Flyer " in the blackberry patch racing home to her commencement she was uneasy. She did not know why. It might have been that she heard what her father told Joe, or it might have been the gleam in his eye, or only that strain which comes in times of stress.

Until the storm struck, she remained with the mourning two on the east porch, staring fearfully into the bloody eye of the long track switch. Lightning seared and scorched the heavens. She prayed and they prayed—sitting down, standing up, walking the floor.

Yes, Luella prayed, too. She didn't pray for wealth and position, either. She prayed for the man she loved, prayed that the twisted father whom she had despised might ride the iron in safety and that he might not be too late.

Lightning grew ever fiercer, thunder more ominous. Rain raced down from the highway to form a lake in the front yard. Then the rain and thunder ceased, and black darkness hung in the sky. They went to the door, where they stood huddled together, looking out.

One unseen blaze set heaven on fire with a dull glow, and in the glow they saw clouds—clouds which were thick and black, churned into a froth and spray, and another dense cloud underneath, all green like the face of the wind-lashed sea. Behind it was still another cloud, spiraled down in a funnel. One second only they saw it. Then the torch went out, and the funnel-shaped cloud went by to the west.

Midnight. Nettie thought the " Jayhawker " should be in Purple Lake. A half hour later it should be in Windigo. But even at 12.45 there was still no message.

Nettie went to the telephone to call the dispatcher. Years ago he had told Mrs. Randall to let him alone because she was then the dispatcher's pest. He had never told Nettie, because Nettie was not expecting calamity. Nothing was on the line to keep him busy—nothing except the " Jayhawker " with Randall at its throttle.

Nettie asked about his one train. She heard him clear his throat and tap on the table with a pencil. She thought he was not going to answer.

" The last report was from Kelton," he finally spoke. " Kelton put them through at eleven-fifty."

"It's thirteen miles from Kelton to Windigo—"

"That's right."

"They should have been through there by—"

"At least twelve-five, we figured."

He was evidently unaware that her father had business at Purple Lake, between Sarvice and Windigo. She did not tell him. She said musingly: "And they're not there yet?"

"Windigo has not reported them," he evaded.

Nettie could hear him breathing into the mouthpiece, and his breathing sounded quick and hard. Even though they stopped at Purple Lake, they should have been in Windigo thirty minutes ago.

The dispatcher cleared his throat and spoke again.

"I wouldn't be nervous over them, Mrs. Grigsby. They might have already come into Windigo. We don't know, because something happened down there about twelve-five, and the wires went dead. Wind blew a tree over the wires, we figure. Don't be alarmed.

"When I know something definite, I'll call you back."

THE wind died down. Four stars twinkled where the cloud had been. The red sliver from the long track switch sneaked under the shade and fell on the hearthstone. Three women watched it in agonized suspense.

"If they only get to him in time," Luella moaned, "I'll be willing to move into a log cabin and live the rest of our days."

Although they did not know it, at that moment a message was coming into Beulah Bend from Windigo by way of Kansas City, telling the dispatcher that No. 9 was not showing at 12.54, that a tornado had swept across the hills near Purple Lake and that the "Jayhawker" was timed exactly to strike it.

Because that message was not definite the dispatcher did not call Nettie Grigsby. He did call the roundhouse and order the wrecker.

When the call sounded in the hush of the storm wake, the three women took their eyes off the scarlet thread on the hearth and listened, listened to the four long blasts which called the crew together.

Nettie looked dumbly at her mother and at Luella. She started to the telephone, but did not touch it.

"I knew it!" Mrs. Randall sobbed. "I've always known it—known for thirty years that sooner or later—"

And Luella wept, too—wept because Ronald's mother wept, although Luella did not know why.

Nettie went to the children's bed, stooped, kissed them, left a wet spot on the cheek of each. Thirty minutes later, the wrecker went out. She heard it go, and wondered why the dispatcher had not called. He had promised. Then she straightened, tensed. A telephone bell was ringing.

Clutching her tight throat, she took down the receiver and croaked:

"Mrs. Grigsby speaking."

AT sixty-one, Engineer Randall's body was twisted and withered, but his mind was as keen as it had been at thirty. Even while he strode toward the engine, he was realizing as never before that this son of his had missed the gleam, and that he himself was partially to blame. Wrapped up in his work, "interested in trains, engines and schedules," as Ronald had phrased it thirteen years ago, he had neglected the important duty of helping his son

to realize that happiness is not measured in dollars and cents and in the opinions of others, but in terms of achievement in work which satisfies the soul.

Instead of directing, he had left to chance and to unbridled feeling and morbid fear the training of his son; and he knew that if he should be late, not only would good years be wasted, but a shadow would fall along his own mottled trail. In that hundred swift strides, he thought of Molly, too. He knew that when Molly had digested the contents of that note and had become fully aware of the unspoken accusation, she would think herself responsible, and that misery would be the lot of her last years.

Spurred by these realizations, he determined this situation would not whip him. He would make it to Purple Lake ahead of Ronald; he would use reason, persuasion, and force, if necessary.

Time was short. The automobile had passed the house at 7.30. Joe had said the drive required four hours. Four hours from 7.30 would be 11.30. He looked at his watch. It was not quite 11.08. He could not possibly run the "Jayhawker" seventy miles in twenty-two minutes!

Whether Ronald would drive rapidly or slowly he did not know; but from the rate at which he left Beulah Bend, Rud thought he was in no particular rush to get it over with. He reasoned that he might safely count on an hour, because after Ronald had got into his garage, he would have to connect the hose, and before that he might even go into the lodge.

He figured every factor, reasoned that he must think not only of Ronald, Molly, and himself, but also of a hundred passengers who had entrusted their lives to his judgment. He could not afford to take foolish risks. The best he could do to Purple Lake would be one hour flat.

Joe was in the cab ahead of him. Joe had whistled in the flagman, had released the brakes, had adjusted his oil feed, and cut down the injector. Between the two was no word, but there was perfect accord and perfect understanding. This boy, now his daughter's husband, he had taught not only to fire an engine, but to weigh and measure life. If only he could thus have taken his own son into the cab—but that was past.

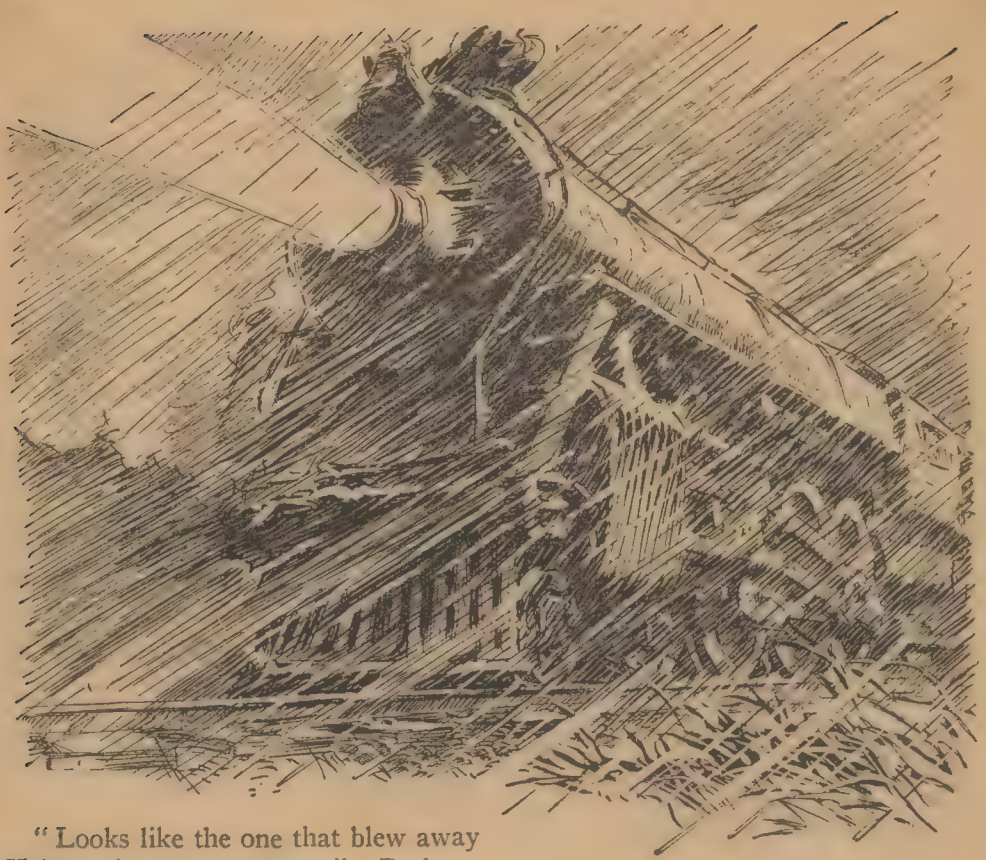
Seventy-five miles had once been speeding. With these new engines, eighty was not fast. Tonight eighty was a snail's pace, but he did not exceed it. Without a stop he roared fifty-five miles down the valley to Benton. Everything was running perfectly. Order boards and signal blocks were green. Other trains were not on the line. No trains. No delay. Only a storm.

Out of the west it came, shafts and bursts of lightning riding ahead, clouds billowing like death smoke in the starless sky. They topped the grade and cut across the hills toward Sarvice and Purple Lake.

It was 11.42 when they came out through the deep cut. They could see for miles into the west and south. Clouds were burning; clouds whipped and lashed into spray and foam; and another cloud, all green like the sea, was underneath; and behind the green cloud was still another, shaped like a funnel.

All night Randall had been watching those clouds. He flashed uneasy eyes over the new one. He called to Joe: "It looks like a twister."

Joe shook his head.



"Looks like the one that blew away Kelton sixteen years ago." Rud remembered that. It had blown a freight train all over a section of woodland.

He kept an uneasy eye on it. At 11.49 he flashed through Kelton. The seething cloud mass was lowering; and bursts of rain were coming like the shelling which precedes the attack.

Three miles from Purple Lake he was within sight of the highway. He had hoped there might be cars or a car stalled in the mud. But there was no car, no light, only the unbroken wall of night with the cone of his headlight following the earth and the flash and flare of lightning in the heavens.

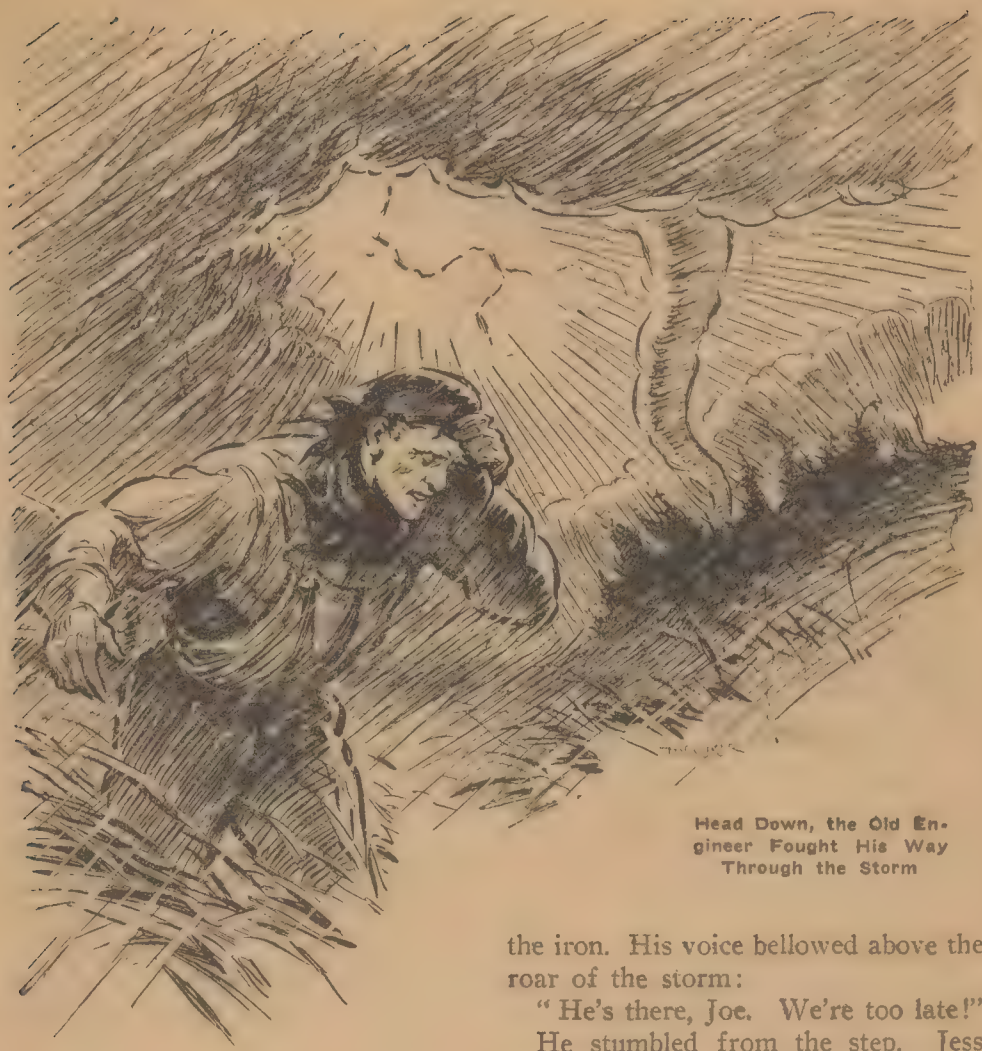
One mile—and fifty seconds. The sky was still burning, the roar of the storm god's batteries rocking the earth.

Another mile—another fifty seconds. The sky was black, and so was the earth. The rain had ceased. The wind had fallen off to a dead calm. Somewhere out there ahead, a mile, two miles, five miles, he did not know, tornado's cavalry had mounted for its mad charge.

HALF a mile—half a minute. The green switch light of Purple Lake was shining like an emerald in a wall of ebony. He closed his throttle, touched his brake valve, and called Joe.

"I'm going in, boy," he said quietly. "You stay with the engine. You take it on in if—"

Joe understood. The roar of mad speed had settled to the slowing clank of drivers, the squeak of springs, the knock of brasses. That roar had gone, but another had replaced it—a roar



Head Down, the Old Engineer Fought His Way Through the Storm

which was shattering the oppressive silence left when the thunder bombardment no more sounded, a roar which would amalgamate life and death into eternity.

Joe knew the roar was there. If Rud knew it, he did not heed. Peering to the left, he had seen the glimmer of a lone square of light. He knew it was in the window of Lake Haven garage.

He went down to the step where he could drop off when they passed the station platform. His foot groped for the iron. His voice bellowed above the roar of the storm:

"He's there, Joe. We're too late!"

He stumbled from the step. Jess Blanton and the doctor came out of a Pullman, came out and went back. The roar of the storm had become loud, loud like the roar of a plunging river. The lightning which had rested was again in action. It played on raging billows, and on a cloud shaped like a funnel.

In consternation the conductor and the doctor went back, but the engineer did not go back. Stooping low, head down, charging through the wind which lifted him and set him down, he fought his way through the storm.

The garage door was closed. He turned the knob. It yielded. The car was there, its motor humming. Heedless of the whirling wind, he flung the garage door open and left it. Wind whipped out, sucking tin cans and old papers.

The old hogger rushed over to the automobile, jerked open the door. Holding his breath, he caught the slumped figure, dragged it from the rear seat, and stooped low over it while the storm raged by.

THE next day, in the room at Ma Shipton's, the engineer and his son sat on the edge of the bed. They read the news item headed:

ENGINEER SAVES HUNDRED PASSENGERS

Below it told how Randall raced south on a record-breaking run with the crack flyer of the M. & M., saw the tornado sweeping in across the tracks ahead, and realizing it would strike close at hand, had the presence of mind to stop his train and avert a catastrophe. Then followed a brief and interesting account of Rud Randall's railroad career. Father and son read it together.

They looked at each other and chuckled. After that they talked about Life, and how Fate deals out the cards and man plays them. Ronald thought sometimes the deal was pretty raw, and his father thought there would be no fun playing the game if the deal was perfect. At length they returned to a subject they had previously thrashed out.

"Say, Dad—" Ronald hesitated, then went on: "I feel like an awful heel, trying to invest—"

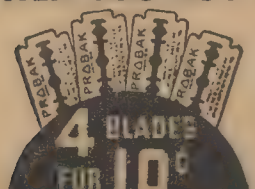
The father cut him short.

"Now you quit worryin' about that little dab of money of yuh ma's and mine. You couldn't help it, and it never amounted to much, anyhow, and—" he laughed softly and stared out across the yards—"don't ever tell yuh ma, but I been wonderin' ever since it began to pile up what the hell sort of an excuse I'd ever give her so I could go on runnin' an engine."

In the dark blue eyes of the son was the brightness of a new understanding.

You Gamble

WHEN YOU BUY THE *unknown*



Games of chance may be all right in their place—but why risk your money when you buy razor blades! Probak Jr. is produced by the world's largest manufacturer of razor blades. Here is known quality—a double-edge blade that "stands up" for shave after shave—sells at 4 for 10¢!

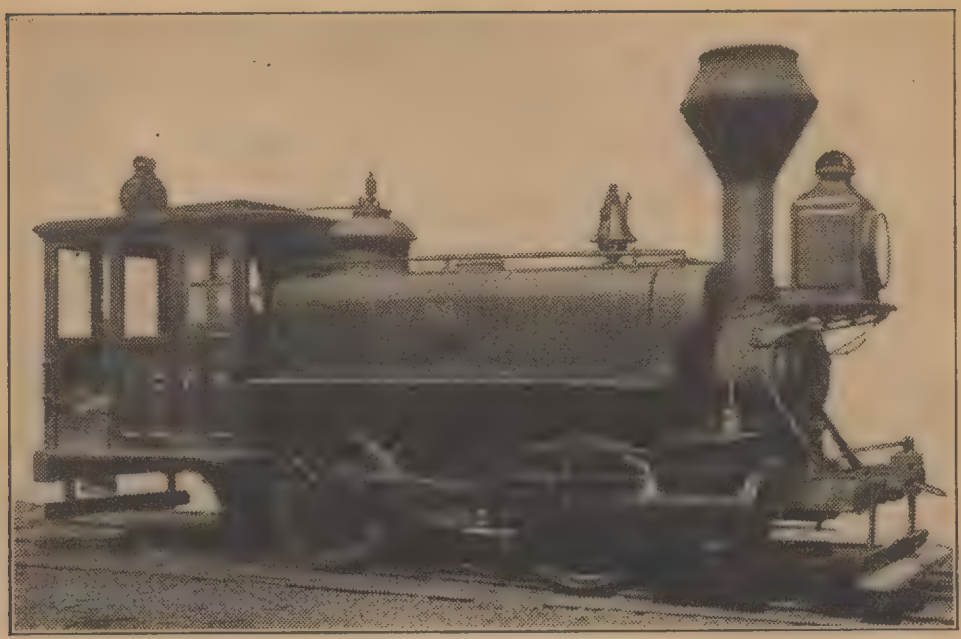
PROBAK JUNIOR

The World's Fastest Steam Train

NOW that new high-speed passenger equipment has been put in service all over the world, and light-weight engines and equipment are stimulating schedules even on railroads which don't have 'em, and running time of famous trains is being cut right and left, let's see which train is the world's fastest. Is it the "400," or the "Zephyr," or the "Hiawatha," or the "City of Portland," or the much-bragged about "Cheltenham Flyer"? Ladies and gentlemen, it is none of these. The world's fastest steam train—and also the fastest train of any kind for its mileage—is an unheralded, unsung, old-fashioned coal-destroyer which every day makes a trip between Chicago and Detroit via the Pennsylvania and the Wabash.

She is the "Detroit Arrow," eastbound No. 4 and westbound No. 7, running between Chicago and Fort Wayne, Ind., on P. R. R. tracks, and the rest of the distance over the Wabash. Both ways she makes the 140.9 miles between Englewood (7.1 miles from Chicago) and Fort Wayne in 120 minutes, averaging 70.5 m.p.h., including two or three stops, and both ways she also covers the 122.4 miles between Gary and Fort Wayne in 101 minutes, averaging 72.7 m.p.h.—faster than the "Cheltenham Flyer" for nearly twice the distance of the British train's run.

But that isn't all. No. 4 has a flag stop at Plymouth, Ind. Between Plymouth and Fort Wayne, 64.2 miles, she is scheduled to run in 51 minutes, at an average of 75.5 m.p.h. If you don't believe it, pick up a timetable of either road and see for yourself. She is thus the first steam train in the world with a start-to-stop run of more than 75 m.p.h. She is hauled by a P. R. R. standard Pacific type, Class K-4s, which has been pulling Pennsy trains for more than twenty years.—Donald M. Steffee.



This Old Four-Wheel Saddle-back Switcher Was Built for the I. C. in 1871 by the Grant Locomotive Works of Paterson, N. J.

Old Gals of the I. C.

By CARLTON J. CORLISS

Public Relations Official, I.C. System; Author of "Trails to Rails"

WHEN the iron horse turned his name in for a number, railroading was shorn of some of its old-time glamour. Consider, for instance, the added touch of romance that would cling to the story of the immortal Casey Jones if that brave engineer had ridden at the throttle of old "Bolivar" instead of No. 638. And how much more thrilling would be the tale of that dashing soldier of fortune, Lee Christmas,* if he had streaked through the Louisiana night at the controls of "Black Prince" instead of some engine that could be identified only by a number!

If these famous Illinois Central engineers had come upon the scene a generation earlier than they did, it is not unlikely that they would have had a turn at these very engines, because old "Bolivar" was then in its prime and running between Jackson, Tenn., and Canton, Miss., where Casey Jones drove his engines many years later; and "Black Prince" was one of the busiest and fleetest engines on the division south of Canton where Lee Christmas began his railway career.

The names of many early locomotives are preserved in the time-yellowed records of the Illinois Central System. On the old New Orleans, Jackson & Great Northern—now the main line of the Illinois Central System between Canton and New Orleans—most of the locomotives bore geographical

** The life story of Lee Christmas appeared in our May, 1934, issue; of Casey Jones in our December, 1932, issue.*

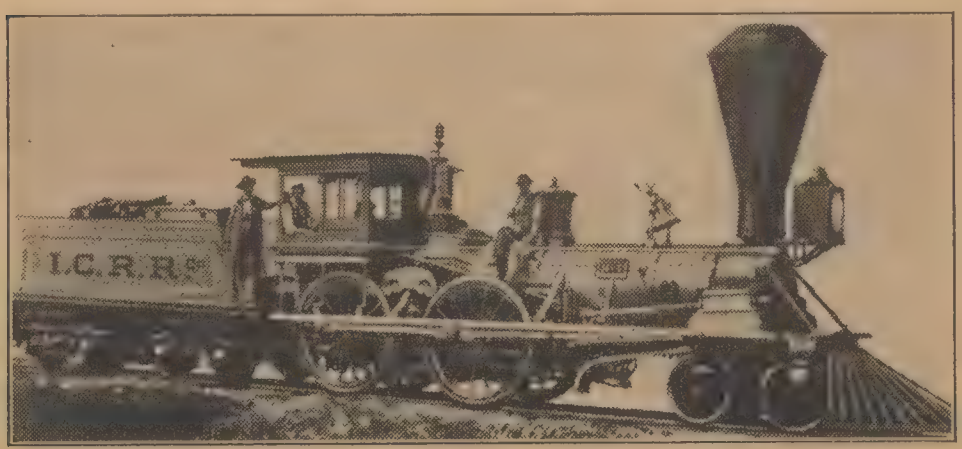
names. For instance, the first engine built for this railroad in 1852 by Matthias W. Baldwin, of Philadelphia, was the "Manchac," named for Pass Manchac, a picturesque bayou-like stream leading from Lake Maurepas into Lake Pontchartrain. Other wood-burners on this road before the Civil War were the "New Orleans," the "Louisiana," the "Mississippi," the "Osyka," the "Jackson," the "Canton," the "Alabama," the "Georgia," the "Florida," and the "Virginia."

Names of local significance were given to other pioneer engines on the New Orleans road. For instance, there was the "Creole," named for the French inhabitants of Louisiana; the "Crescent," named for New Orleans, the Crescent City; the "Magnolia," for Mississippi, the Magnolia State; the "Pelican," for Louisiana, the Pelican State; and the "James Robb," for the first president of the railroad.

The "Southerner" and "Orangeburg" were built in the shops of the South Carolina Railroad and purchased second-hand by the New Orleans road; and the "Dart," built by the Tredegar Locomotive Works, of Richmond, Va., was also a second-hand acquisition. The "Dart" was the smallest engine ever operated on the New Orleans road. It was equipped with only one set of drivers and weighed but ten tons, whereas most of the other pre-war locomotives mentioned above, as well as the "Eclipse" and the "Champion" of that road, had two sets of drivers and weighed from fifteen to twenty-two tons each.

Many of the pre-war locomotives on the old Mississippi Central Railroad, now the Illinois Central between Canton and Grand Junction, Tenn., proudly bore the names of rich planters and other prominent Mississippians largely through whose efforts, influence and financial aid the railroad was built. Thus there were engines named after James Brown, A. S. Brown, Judge Brown, D. B. Malloy, M. M. Pegues, E. Taylor, Joseph R. Davis, Hugh Torrence, William Booth, C. M. Vaiden, E. F. Potts, G. F. Neill, Joseph Collins, Jacob Thompson, P. R. Leigh, Austin Miller, and A. M. Clayton.

Other Mississippi Central engines bore the names of prominent officers of the road including Judge H. W. Walter, the moving spirit behind the enterprise, who turned the first spade of earth and drove the last spike in the construction of the road; Walter Goodman, the first president of the road; General Absalom M. West, a later president under whose direction the road was restored to serviceability after the war; A. J. McConnico, secretary; W. F. Mason, chief mechanical officer, and General Rufus Polk Neely, promoter and president of the Tennessee extension of the road.



No. 1 of the Illinois Central, the First Iron Horse Ever Seen in Many Illinois Towns. She Was Built in 1853

Photo from Joseph Lavelle Collection

Another Four-Wheel Switcher of the Old I. C. This One Was Constructed by Rogers of Paterson, N. J., in 1857, Had 13 x 22-Inch Cylinders and Weighed 40,000 Lbs., Without Tender

THREE locomotives that helped to make railway history in Mississippi in the early days were the "Mississippi," alias the "Bumblebee," the "Commercial" and the "Escape."

The "Mississippi" (nearly twenty years older than an engine of the same name on the New Orleans-Canton road) was the first locomotive ever to turn a wheel in Mississippi. It was built in 1834 and was running a few miles out of Natchez on the old Mississippi Railroad about 1837. The railroad was partly destroyed by the Natchez tornado of 1840, and some years later the "Mississippi" was purchased by the Grand Gulf and Port Gibson Railroad south of Vicksburg. During the Siege of Vicksburg it was captured by Federal forces and employed in transporting troops and supplies.

After the war the "Mississippi" was shipped up to Vicksburg by water and operated on what was called the crookedest railroad in the world, a 7-mile line extending from Vicksburg southward to Warrenton. One day the engineer forgot to close the throttle and the "Mississippi" ran off the end of the track and toppled over into a mud bank at Warrenton, where it remained half submerged for several years. In the 1880's it was rescued and taken to Brookhaven, Miss., where it was rechristened the "Bumblebee," and operated for several years in gravel pit service.

In the spring of 1893 the engine, renamed the "Mississippi," made its last and longest run under its own power, from Brookhaven, Miss., to Chicago, where it was exhibited at the world's Columbian Exposition. It was later exhibited at the old Field Museum in Chicago, at the World's Fair in St. Louis, and at both the 1933 and 1934 Century of Progress Expositions in Chicago. It has since been presented by the Illinois Central System to the Museum of Science and Industry, Chicago.

The "Escape" was one of the pioneer locomotives on the West Feliciana Railroad between St. Francisville, La., and Woodville, Miss. During the Civil War brass and other metals were difficult to obtain in the South, and the "Escape" was dismantled and converted to scrap by the Confederate forces.

Many of the locomotives operated on the early lines of the Illinois Central System north of the Ohio River also bore names instead of numbers. The first engine to run westward from Dubuque, Ia., for instance, was the "Dubuque," which made its maiden trip as far west as Dyersville in May, 1857. Next in age on this road was the "Delaware," and this was followed by the "Sioux City." A few years later the motive power of the Dubuque-Sioux City road also included the "Waterloo," the "Cedar Falls," and the "Manchester," all named for towns along the route.

Some old-timers living in Iowa still recall the Dubuque & Sioux City "Vixen," built in 1861 by William Mason, which, according to H. W. Kemble, of Auburn, N. Y., "was one of the locomotive oddities of that time . . . She hauled work and gravel trains and was such a curiosity, owing to her peculiar construction, that she attracted unusual attention, but she appeared to be efficient with the few cars hauled at that time."

The "M. K. Jesup" was another well-known engine on the Iowa lines in the early days. It was named for Morris K. Jesup, president of the Dubuque & Sioux City and financial backer of Robert E. Peary's early arctic expeditions.

AT least six locomotives on the original I. C. in Illinois prior to the Civil War were designated by names. They were the "Cairo," the "Union," the "Rogers," the "Roxy," the "Betsy" and the "Mary Ann."

The last two were not the only locomotives on the Illinois Central lines that bore names of women in the early days. For instance, there was the "Fannie McCullough," a familiar sight on the old Grayville & Mattoon Railroad, now the Evansville branch of the Illinois Central, in the 1870's and 1880's. This ornate little engine was named for a very beautiful young lady, the daughter of John McCullough of Olney, Ill., and proudly carried her name in polished brass name-plates on both sides of the cab.

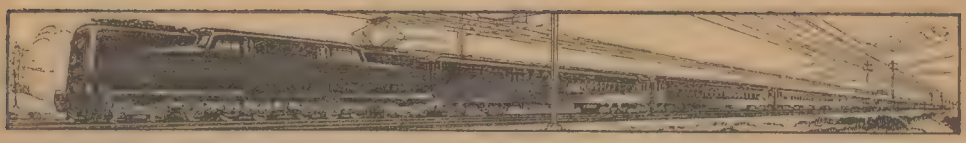
Still another engine with a feminine name was the eccentric "Mother Holmes," about which many amusing yarns are told. Variously called a "watch charm," a "dinky," a "teakettle," a "windjammer" and a few names that would not look well in print, the "Mother Holmes"—said to have been named for a boarding house keeper dear to the hearts of the railway men—began her somewhat checkered career in the late 1870's on the old Indiana & Illinois Southern Railroad between Effingham, Ill., and Switz City, Ind., now a part of the Illinois Central line to Indianapolis.

Old-timers who had a speaking acquaintance with the "Mother Holmes" will tell you that she could never be depended upon, and the members of the crew that started out with her never knew when they would see their families again. Sometimes she would make the heavy grades between Palestine and Switz City with trains of six or seven cars; at other times she would not budge in her tracks with so much as a caboose, and fence rails, old stumps and other fuel would have to be fed to her for hours in efforts to get her steam up. She balked at the slightest provocation and sometimes refused to run for days at a time.

Companions of the "Mother Holmes" on this line were the "D. W. Odell," named for Judge David W. Odell of Oblong, Ill.; the "Wolfe," named for Joseph W. Wolfe, president of the railroad; and, last but not least in popular interest, an ornery nondescript contraption which railway employees christened the "Rackaramus." Old "Rackaramus" was a little four-wheeled dinky that "carried its drinking water on its back," and rated in performance even below the "Mother Holmes." It was off the track about as much as it was on, and for years its track-jumping habit is said to have entertained the natives living along the route.

One of the last locomotives on what is now the Illinois Central to be known by name instead of by number was the old "Yellow Dog." In the late 1890's some lumbermen built a 20-mile logging road between Moorhead and Ruleville, Miss., and named it the Yazoo Delta Railway.

They bought a pudgy little second-hand locomotive and gave it a coat of bright yellow paint. The huge initials Y. D. on the side of the tank led a local wag to nickname it the "Yellow Dog." The nickname caught the popular fancy and in time it also came to be applied to the railroad and its Tutwiler extension. Although the Yazoo Delta Railway was acquired by the Illinois Central thirty-five years ago, it is still widely known in the Mississippi Delta country as the "Yellow Dog."



Giants of the Pennsy

By PAUL T. WARNER

Former Editor of "Baldwin Locomotives"

THE Pennsylvania Railroad, which carries more passengers and hauls more freight than any railroad in North or South America, also owns more locomotives than any road on the two continents. Yet its vast army of iron horses—at present it numbers around 5,000—has been so well standardized through years of experiment that it is divided into fewer actual classes than the motive power of many lines with a tenth as many locomotives as the Pennsy has.

The process of experimenting with different types and kinds has been as interesting as it has been fruitful. Perhaps one of the most interesting experiments of all has been that one with articulated and Mallet* engines of which the P. R. R. has had a total of 13. Here is a list of them:

Class HH-1s, 2-8-8-2 type, No. 3396, built by American Loco. Co. in 1911.

Class CC-1s, 0-8-8-0 type, No. 3397, built by Baldwin in 1912.

Class HC-1s, 2-8-8-0 type, No. 3700, built at the company's Juniata shops, Altoona, Pa., in 1919.

Class CC-2s, 0-8-8-0 type, Nos. 7250, 7332, 7335, 7649, 7693, 8158, 8183, 9357, 9358, 9359, built by Baldwin in 1919.

** Editor's Note: All Mallets are articulated (i.e., jointed, or with two sets of drivers and cylinders), but not all articulated engines are Mallets. Every true Mallet is "compound"; steam exhausted from its rear (high pressure) cylinders is used over again in its front (low pressure) cylinders before going out the stack. On the other hand, some articulated engines are single-expansion.*

Engines 3396 and 3397 were experimental, and were intended for pushing service on the Allegheny Mountain grades. At the time it was built No. 3396 was noteworthy for having four single-expansion cylinders. The boiler had a radial-stay firebox, and carried a pressure of 160 pounds. The locomotive was stoker-fired. The firebox had a combustion chamber, and the tubes were exceptionally long (24′ 8⅞″).

Engine 3397 was a compound, and was designed in accordance with Pennsylvania standards, with a Belpaire boiler carrying a steam pressure of 205 pounds, and with machinery and running gear details interchangeable, where possible, with corresponding parts of Consolidation type engines of the H6 and H8 classes. This locomotive was also stoker-fired.

These two locomotives were carefully checked in pusher service, and while they showed high capacity, they were expensive to maintain and were frequently out of service on account of needed repairs. Engine 3396 finally disappeared from the locomotive register in 1929, and engine 3397 in 1931.

Engine 3700, Class HC-1s, was designed in the light of six years' experience with the two earlier locomotives. It was a unit of extraordinary capacity, and was unique in many of its details. The four cylinders had the same dimensions, working single-expansion with 205 pounds steam pressure. Based on experience with heavy freight locomotives of Class I-2s Decapod

Three of the P.R. R.'s Four Articulated Classes. (Top) No. 3700, Huge 2-8-8-0 Type. (Center) No. 3397, 0-8-8-0 Type. (Bottom) No. 7259, One of the Ten Engines Still in Use

(2-10-0) type, which had been designed about three years before, engine 3700 was arranged with a 50 per cent cut-off in full gear, in order to economize in steam consumption when developing high power at slow speed.

Each of the cylinders was provided with a separate exhaust nozzle, and there were four separate stacks grouped in a single casting of large diameter but shaped externally like a conventional smoke stack.

No. 3700's boiler was of extraordinary capacity; its maximum outside diameter was 110 inches (about the same as the N. P.'s 2-8-8-4 types), and it had comparatively short tubes and a combustion chamber nearly 12 feet long. In order to provide for expansion and contraction, a "crimp" or corrugation 5¼ inches wide was placed between the firebox and combustion chamber. Following Pennsylvania standards, the Belpaire system of staying was used. A Duplex stoker was applied. As the combined length of the firebox and combustion chamber was 25 feet 9 inches, while the tubes were only 19 feet long, special appliances were necessary to show the depth of water over the front end of the combustion chamber crown when working on heavy grades. Thus the design throughout presented many novel and ingenious features.

The P. R. R. intended to use engine 3700 in road service, and actually did try it, but at the time of its construction the drawbar pull was too great for trains not equipped with the strongest type of coupler. Accordingly the locomotive was placed in pushing service on the Allegheny Mountain grades. It did good work for several years and the experience acquired in its operation was valuable; but like engines 3396 and 3397, it was difficult and expensive to maintain and spent too much time in the repair shop. It was finally dropped from the locomotive register in 1928.

The ten locomotives of Class CC-2s were built for heavy pushing and hump-yard service on the lines west of Pittsburgh, and represented conventional practice. They are still in existence, and have proved satisfactory in the service for which they were designed. At present they are all assigned to the Columbus, Ohio, district. They are specially fitted for slow-speed, heavy work, and have compound cylinders and driving wheels of small diameter. The boilers are of the radial-stay type, and are stoker-fired.

Here are the principal dimensions of these four classes:

Class	Cylinders	Driver Diameter	Steam Pressure (Lbs.)	Grate Area (Sq. Ft.)	Total Heating Surface (incl. superheater)	Weight (Lbs.) On Drivers	Weight (Lbs.) Total	Tractive Force (Lbs.)
HH-1s	27"x28"	56"	160	96.3	7435	487,500	482,500	99,144
CC-1s	25"&39"x30"	56"	205	78.0	5909	408,700	408,700	82,716
HC-1s	30½"x32"	62"	205	112.0	8872	553,000	586,560	147,640
CC-2s	26"&40"x28"	51"	225	96.0	6392	458,150	458,150	99,792

The weights of Class HC-1s are estimated. The tractive forces were calculated from the same formula as those given on page 80 of the April, '35, issue of RAILROAD STORIES.

The Soapstone Limited

Goldenrod and Me Visit the Athol Branch

By THE ENGINE PICTURE KID

ACCORDING to the figures, next to being in bed, a railroad train is the safest place in the world. But it ain't the most comfortable, especially riding the brake beams, like I done all the way from the Pacific Coast to New England on account of a fellow named Bob Briggs, who lives in a place called Athol, Mass.

Briggsy ain't no real dyed-in-the-fleece engine picture fien' like I am. His particular aberration takes the form of collecting Farley's Follies, which is stamps and has no connection with dames. In fact, there ain't no relation between the two, and guys which go for one do not as a rule care for the other and vice versa.

Bob also saves unusual cachets,* envelopes commemorating inaugurations of new railroad runs, last trips on old pikes and so forth. He is a very busy man keeping track of all these things, besides being Secretary of the Central New England Pre-cancel Club.

* *See article by Chas. Corwin in Oct., '34, issue*

Still he writes me a letter saying that he saw in RAILROAD STORIES where me and Goldenrod are booming around the country like young folks had ought to do, instead of being home guards on a three and a half mile line like the Happy Valley up in Saskatchewan, even if it is owned and run by Hardshell Higgins, who besides being a man with a very hair-trigger temper, is also Goldenrod's father and an ex-boomer hoghead himself.

"Why don't you and that all-burn haired girl friend of yours come down to Athol, Mass?" Briggs says in his letter. "I believe I could land you both a job on the Rabbit Branch of the Boston & Albany railroad."

"Why don't we?" I says to Goldenrod.

A faraway look creeps into her big, blue eyes. "Gee," she says. "I haven't had Thanksgiving dinner with Granny Higgins since I was knee high to a trailer truck and Dad was engine driving on the B. & M."

But first let me explain all about this here Rabbit Branch. It has been abandoned for several months now, after sixty years of faithful railroad service, not because of trucks and busses, let us be thankful, but because people in Boston is drinking so much water. The City Fathers decided to buy up the Swift River Valley and make a reservoir out of same, and since the branch runs through the valley, and it ain't much use running trains through country that is thirty feet under water, the last run was made June first, 1935, and I got a cachet commemorating the event from Bob Briggs to prove it.

Well, the City of Boston paid the B. & A. $575,000 for a little more than 29 miles of the Rabbit Branch, which is a great deal of money for any branch. But it seems like it will be quite a while before the city will flood the valley, so the B. & A. gets permission to run a few trains over it to take care of the fall business, and that is why Goldenrod and me would be able to get on so easy, and not have any trouble like we did up on the Northwestern Pacific.

"Goldenrod," I says, "what about Bob Briggs and his offer? It sounds good to me."

"I bet Granny Higgins would be glad to see us," goes on Goldenrod. "She's living up in Keene, New Hampshire, only about forty miles from Athol."

"That's nice," I says. "Who is Granny Higgins?"

"Dad's mother, silly," laughs Goldenrod. "Wait till you taste her pies and her turkey dressing."

SO we come to Athol. Naturally Goldenrod don't ride the brakebeams east. She travels the plush on a pass like the daughter of the president of a railroad should, even if it is only Hardshell's one-horse (iron) pike up in Canada.

Briggsy meets us down in Springfield. He is a quiet-spoken tall, blond chap with blue eyes and an athletic, streamline build, and a couple of summers inside of thirty years old. Right off he wants us to come out to Athol and meet the missus.

"Love to," says Goldenrod, speaking for both of us just like we was already married, and not only engaged to each other. "But the Kid and I are just plain working folks. How about those jobs first?"

"All lined up," smiles Briggs. "I hope you won't be disappointed though, Miss Higgins. Business on the Rabbit Branch isn't what it used to be.

Only run one train a day now. Old Matt Thayer handles the throttle on the 'Soapstone Limited,' and it would practically take an act of God to bump him off his run before they start plugging up the valley and filling it with water."

"I wouldn't think of taking it anyhow," laughs Goldenrod, wondering what kind of a job Briggs has got for her.

"Besides," goes on Briggs seriously, "Matt knows all the best spots for rabbit hunting."

"Rabbit hunting!" I says.

"Sure," explains Briggs easily. "The season opens the middle of October and most of the passengers are rabbit hunters. Matt doesn't always bother letting them off at stations. He just puts 'em down wherever the cottontails are thickest."

"That," says Goldenrod, "is what I call service."

"The Kid can fire for Matt," continues Briggs. "Matt's regular fireman got married and went off on his honeymoon. And, Miss Higgins, you're marked up for the station agency at Haleyville, West Barton and Barton."

"Phew!" says Goldenrod. "That sounds complicated."

"It ain't though," says Briggs. "Fred Vaughn's been station agent at Greenwich Village for forty-five years. Lately he's been agent at Enfield too. Drives between 'em in his car."

Haleyville is Goldenrod's headquarters. The lonely, old, gray frame building has a regular old-style bay jutting onto the platform. At one end of the warped and rotting platform is a farm pump with a long rusty handle. This is the depot's water supply. At the other end is a freight shed.

The second floor of the station is devoted to living quarters for the agent. "Anyhow," I says to Goldenrod, "the roof don't leak—much."

Matt Thayer gives me a hand with Goldenrod's bags and things. Jim Kenny, the con, helps too.

The veteran hogger of the Rabbit Branch is a wiry, pint-sized, clean-shaven little fellow with a sharp chin, and bright, flashing eyes. He watches Goldenrod as she goes over to the telegraph key in the bay, flips open the switch, taps the key once or twice to get the feel of it and then starts calling the dispatcher at Springfield.

"Gosh-all-hemlock," he says, jabbing Kenny in the ribs. "I've heard a lot o' brass pounders in my day, but that gal's got 'em all beat. She ain't no ham, Jim."

"No," I says, answering for Jim. "She ain't. And personally I also think she is very good-looking."

Goldenrod reports herself on duty. The dispatcher taps out a thanks for the call, and wishes her good luck. The station seems strangely quiet again after the clacking of the telegraph sounder has ceased. Kenny hauls out his watch.

"Ought to be goin'," he says.

"Just a minute," says Goldenrod to Matt. "Let me get this straight. Besides Haleyville, I have Barton and West Barton to look after?"

"Don't let it bother you none," says the hogger. "West Barton is two miles up the line, and Barton's three miles beyond that. If anybody comes into them depots for a ticket or to ship freight, they'll pick up the phone on the outside wall and give you a ring. Then you get into that flivver parked behind the freight shed and drive up through the woods. Ain't frequent you'll get a call."

"Isn't there a town at Barton, or West Barton either?" Goldenrod asks.

"Used to be," replies Matt, thinking of the days when four trains a day was run on the branch. "Quite a heap of folks lived here. Mostly they farmed in summer and cut ice in winter. Electric refrigerators melted the ice business from under 'em. Farmin' got so it didn't pay, neither. And them as isn't left before is gettin' out o' the valley now before the reservoir gets built and floods it."

JIM KENNY looks at his watch again. Matt sees him.

"Come on, Kid," he says. "We gotta roll."

Goldenrod follows us to the platform. She gives me a warm kiss as I swing into the gangway.

Kenny gives Matt the highball. We pull away from the depot, leaving Goldenrod standing on the platform watching us until we swing out of sight around a bend in the road.

Our train consists of a combination baggage coach, railway mail car and passenger coach with a box car and caboose hooked on behind. In spots the tracks parallel the Swift River, which is going to supply Boston with its water reserve, and I must say it is a very clean looking river for such a purpose.

Along the road are old ice houses, long since abandoned and rotting where they stand. There's a place called Soapstone on the line, but if there was any soapstone in the neighborhood you can't see it from the railroad. All that is there is a big charcoal burning furnace with a lot of cordwood piled around it and a decrepit house nearby.

Matt don't even give Soapstone the whistle as he goes by.

Personally I cannot help thinking that old man Higgins, Goldenrod's Dad, with Goldenrod herself at the throttle of his Number One and only engine, done more business on his Happy Valley line than the Rabbit Branch of the B. & A. is handling.

Briggsy meets the train at Athol. "Where's Goldenrod?" he asks.

"On the job at Haleyville, Barton and West Barton," I says.

"How about dinner up at the house?" goes on Briggs. "Besides, I got some new pre-cancel air mails you oughtta see."

I have to postpone the dinner until Goldenrod can get a day off, I tell Briggs, and we ain't had a chance to walk around Athol good before it is time to start back for Springfield. As I climb aboard Briggs hands me a paper.

"Give it to Goldenrod when you go by," he says. "She might like to keep up with the news while she's down at Haleyville."

After we clear Athol and Matt gets through whistling for a flock of grade crossings, I ease over to the left hand seatbox, cock my legs up and start reading the paper Briggs gave me. The news is mostly politics.

But sprayed across the front page with a four column headline is the story of a holdup of a B. & A. paymaster as he was going into the offices down at Springfield. I show it to Matt.

"Yeah," he says, "the boys were talkin' about in the locker room this mornin'."

"Well," I says, "maybe I had better not give this paper to Goldenrod. It might scare her, being alone like she is in the old depot at Haleyville."

"Rats," says Matt. "Gals like her don't scare easy. Besides them fellers got off in a high-powered car, accordin' to what the boys was sayin'. Most likely they're half way to the Coast by

this time. They ain't goin' to hang around Springfield."

"I guess you're right," I says. Just to be safe, I throw the paper into the open firebox door.

Suddenly Matt shuts off steam and starts to coast. His left hand reaches for the bell cord. Then I will be hanged if fellows with guns under their arms don't start swarming onto the right-of-way. Matt applies his air and comes to a stop, while I shake in my shoes.

"What is it, Matt?" I says. "A holdup?"

"Naw," says Matt, leaning out the cab window and looking back along his train. "Rabbit hunters."

Well, I am mighty relieved as the rabbit hunters swarm aboard. Jim Kenny comes up forward.

"Got 'em all, Jim?" says Matt.

"All but five," replies Jim, snapping a rubber band around a sheaf of tickets. "There's three down below Barton, and a couple got lost in the woods somewhere."

"I'll watch for 'em," says Matt. "Probably got over in them bogs other side of the river."

With me staring into the woods from the left hand side of the cab and Matt watchin' his side, we locate the missing nimrods four miles down the line. Then we pick up the others below Barton.

WE'RE rolling fast and there's a happy grin on Matt's face till he rounds the bend that brings the Haleyville depot into view. There's a slow board out for him.

"What the blinkety-blank!" explodes Matt, slapping on an air application. "Ain't never picked up no orders at Haleyville before."

Goldenrod is on the platform holding up an order hoop with a sheet of flimsy clipped to it. I cross over to the right hand gangway to pick up the message. Catching the hoop in the crook of my arm, I take out the folded paper and toss the ring back on the station platform.

"How are you doing?" I shout to Goldenrod, as we drift past and Matt opens up on his throttle again.

"Just fine," she yells back, giving me a smile that has the cash customers back in the coach craning their necks to get another glimpse of her long after we have passed the station. Of course they do not know Goldenrod is the girl I am engaged to.

"Pass it here," grunts Matt, referring to the flimsy.

He unfolds it hurriedly, squints at it a couple of times, and scratches his head. He hands me the paper.

"Hanged if I can make head or tail of it," he snaps.

I look at the paper and I have got to admit that for a moment I am puzzled myself. The order reads:

SWTHART PIK UP SPNGFLD LPSTK CN CFEE . . . SWSS SFTY PNS DZ ORNGES LVE GLDNRD.

"What is it?" says Matt. "Code?"

"No," I says. "It ain't a train order. Just some things Goldenrod wants me to bring back from Springfield for her."

"You don't say," grunts Matt. "Read it, anyhow. An engineer's supposed to know what's in every order that comes into his cab."

"It's kind of personal," I says.

"Well," storms Matt. "I don't care if it's the message from Garcia. Read it."

So I translate Goldenrod's message which she has abbreviated like ops often do.

"Sweetheart, pick up in Springfield a lipstick, a can of coffee, some dotted Swiss, a package of safety pins and a dozen oranges. Love, Goldenrod."

"Fine thing to be delayin' the Soapstone Limited for," barks Matt.

On account of because we don't stop at Haleyville unless there is customers getting on or off the train there and it ain't in very good rabbit country anyhow, Goldenrod and me gets to be what you might call almost strangers the next few days. A hand wave, a smile as the goat rolls by and them messages handed up by hoop is our only contact.

It is a very peculiar position to be in with respect to the girl you are engaged to, but still I am very glad that I pass Haleyville twice a day.

We don't get to Briggsy's for dinner, neither. And Thanksgiving being a busy day on the Rabbit Branch, with hunters strewn all along the line, Goldenrod gets word she has to be on duty at Haleyville, West Barton and Barton all day long. That looks like it knocks Granny Higgins' stuffed turkey into a cocked hat.

BUT when Goldenrod sets her mind on a thing, like the rest of the weaker sects, she generally gets it. I pick up a message from her one day that reads:

SNCE CNT GO GRNYS THNKSGVNG LTS HVE TRKY DNR HLYVLE.

It sounds like a good plan at that. Instead of going to Granny Higgins' we will have our spread in the depot at Haleyville and invite Granny Higgins and the Briggses down. And Goldenrod says for Matt Thayer and Jim Kenny and the rest of the crew to join in too, if they can stop over long enough to snatch themselves a turkey wing and a slab of pumpkin pie.

However, it is up to me to get the turkey and while I am pondering on how I can do that without spending very much money I get an idea which I think will be very good business for the Boston & Albany, and will maybe also produce a turkey at Haleyville, and I will thus be killing two birds with one stone.

The division super at Springfield listens while I explain it to him.

"It is like a turkey raffle," I says, "only different. I will take pictures of passengers all along the Rabbit Branch getting onto the train, and I can take them from the cab gangway."

"Where does the turkey fit in?" asks the super.

"Well," I says, "I am coming to that part. We will put a number on the back of each of these pictures and then put the numbers in a hat and pull out one. You or me or some other honest employee of the B. & A. doing it. Then we identify the winning customer by the number which will correspond to the number on his picture."

"Yeah," says the super. "Then what?"

"Then," I says, "the Boston & Albany presents the lucky person with a Thanksgiving turkey as a compliment from the railroad."

The super rubs his thumb and forefinger over the stubble on his chin, looking like he is trying to remember whether he shaved that morning or not.

"A turkey won't cost much," he says slowly. "Reasonable advertising. Good publicity."

"Yes, sir," I says, getting to the really important part of my scheme. "That is why I figured it would be a very nice gesture on the part of the B. & A. if they would also give a duplicate turkey to the station agent that sold the winner his ticket."

Of course, I was figuring on maybe Goldenrod winning that turkey, although I do not say so to the super.

The super has to scratch his chin some more. "The company might be able to afford two turkeys," he says carefully.

"Yes," I says, "they might. Especially since they are going to get over a half million dollars from Boston for the Rabbit Branch when the Commonwealth turns it into a reservoir."

"That," says the super, "is a different matter." He coughs. "I'll take up the turkey business with the passenger department. Good day."

The passenger department thinks the scheme is very good like I do myself, and right away the depots at Springfield and Athol and all along the branch are sprinkled with posters showing a big turkey gobbler in the arms of a railroad passenger. The customers seem to like the idea, too, because business starts picking up right away, there being a lot of guys in Massachusetts besides myself who would rather win a turkey than buy one.

Some folks even buy a ticket just to ride down the line and back again. Bob Briggs he makes several trips to Springfield. And, of course, I start taking pictures right away, shooting individuals of all age and every sex as they get aboard the Soapstone Limited. My hopes are high, the only trouble being that Haleyville being further in the woods than most of the other depots there ain't any customers getting onto Matt's train there. That being the case, I do not see how Goldenrod can win the turkey.

But I figure it is solved the day Jim Kenny jerks the cord calling for a stop at Haleyville.

"A customer," I says to myself, at the same time being very glad of a chance to talk to Goldenrod in person for a couple of minutes.

"Maybe," I says to Matt, "it wouldn't hurt none to give this engine an oil-around at Haleyville."

"Is that so?" Matt asks. Then he sees me staring up the track towards Goldenrod, and he grins. "On second thought, maybe I will," he says, slipping me a wink. Matt ain't a bad fellow at all.

He reaches for his oil can and swings down from the cab as soon as we pull into the station. I'm already on the platform, hurrying toward Goldenrod, although I do not get to her first.

A spry little old lady with snow-white hair has already alighted from the train and is throwing her arms joyously around the trim shoulders of Hardshell Higgins' daughter.

"Granny!" exclaims Goldenrod. "I didn't expect you so soon."

"Glad to see me though, ain't ye?" laughs the old lady. "I figgered I'd better come stay with you a piece and see how you was gettin' on. My, how you've growed."

Jim Kenny puts Granny's straw suitcase down on the platform. Goldenrod introduces me to Granny.

"Hmm!" says the old lady. "Kind of needs filling out a bit around the boiler, don't he? But they say sometimes them skinny ones make the best husbands."

Goldenrod changes the subject. "Got a big surprise for both of you," she says to me and Granny. "Dad wired this morning. Said when he heard Granny was going to cook the Thanksgiving dinner at Haleyville, he decided to join the party."

"The young scalawag!" snorts Granny, though personally I would not call Hardshell Higgins a young man. "Now he's president of his own rail-

road I hope he gives himself a lot of that rawhiding he was forever moanin' about when he drove engines in New England."

"Ma'am," I says to Granny, "he has give most of that rawhiding to me when I was firing on the Happy Valley line. Your son is a man with a very . . ."

"Sssh!" says Granny Higgins, her eyes sparkling. "Don't tell me his good points. Let me guess 'em."

OUT of the corner of my eye I catch a glimpse of a fellow going over to the pump at the other end of the platform. He has got a gallon thermos jug with him which he starts filling.

"Goldenrod," I says quickly, "you got a customer."

Goldenrod just smiles and shakes her head. "Just one of Matt's rabbit hunters, I'm afraid. He comes over two or three times a day for water. Told me he and his pals are camped back in the woods."

However, I decide I will take his picture anyhow because he might buy a ticket from Goldenrod later, when he is through shooting at the cottontails. Matt comes down with his oil can and starts talking to Goldenrod and Granny. Kenny looks at his watch.

"Gotta get movin'," he says. "Remember, Matt, we're carryin' the U. S. Mail."

Still I manage to get a nice shot of the fellow at the pump. He don't notice me take it, either, which I figure will give him a big surprise if he buys a railroad ticket and perhaps wins a turkey besides. However, I guess this guy and his pals like it in the brush because although I see him a couple of more times getting water at the Haleyville depot pump, he don't ever get on the train. He don't even wave at it when we roll by. And in fact there ain't no customers get on from Haleyville at all.

I forget to take out the Haleyville camper's picture when I turn in the big bunch that I have took into the super's office the day before Thanksgiving. I guess I have other things on my mind, like having to buy a turkey for Goldenrod instead of winning one, besides the mile-long list of groceries she and Granny has made out for me to get in town.

In the afternoon Bob Briggs rides the "Athol Thunderbolt" down to Springfield. It is, of course, the same train as the "Soapstone Limited," only it goes by a different name on Mondays and Wednesdays. Bob has a lot of cachets he is mailing to himself and he wants to be on hand to get them out of the post office at Springfield.

After he has got them, I suggest we go over to the B. & A. offices and see how the turkey drawing turned out.

"Perhaps you won it, Briggsy," I says.

"If I did," he comes back generously, "we'll eat it tomorrow at Haleyville."

There is quite a crowd in the superintendent's office when we get there, including the local head of the railroad dicks, some city cops and a deputy sheriff who is all there I guess to see that the drawing is done honest. The minute I get into the room, the super points to me.

"That's him!" he says, paying little or no attention to his grammar.

"Gee," I says, "did Mr. Briggs win the turkey?"

"Never mind no turkey," barks the railroad bull, turning to a couple of cops. "Grab him, boys. And watch out! He may be desperate."

The cops rush me before I can move,

and I could not have got to the door first, anyhow, because it bursts open and Hardshell Higgins rushes in all excited.

"Where in blazes is Haleyville?" he shouts. "And what's the Rabbit Branch on this pike?"

For once in my life I am really glad to see Hardshell, even if he is my future father-in-law.

"Dad," I says. "Explain to these cops that I ain't done anything."

"Don't 'Dad' me," he says.

"How do I know what you've been doin' here? You sure didn't do nothin' on the Happy Valley. That was the trouble—one of 'em, anyhow. Nothin' but take pictures."

"That's it," growls the railroad bull. "We're holding him for taking a picture."

He comes forward and shoves under my nose the picture of the bird getting water at Haleyville.

"Where did you get it?" he snarls. "Come clean, or you'll be having Thanksgiving dinner in the calaboose."

"Thanks for the invitation," I says. "But I have already got a date with Goldenrod for tomorrow."

"Quit stallin'," commands the bull. "Where did you take this picture?"

"Haleyville," I says. "Him and his pals are camping out in the woods back of the depot."

The bull jumps up and runs for the door, with the deputy sheriff right behind him. "Come on, boys," he says. "That's the gang that held up the B. & A. paymaster."

"Ain't you goin' to take the Kid with you?" asks Hardshell, kind of disappointed as the cops dash out of the office.

"Nope," calls back the railroad bull. "Pick him up later if we need him for identification."

"Never mind," I says to Briggs. "Maybe you won the turkey. I'll ask the super."

"Fellow named Foster won it," the super says. "Bought it at Athol."

"Gosh!" I says. "That's too bad."

"What do you mean—too bad?" cuts in the superintendent. "You can buy yourself and all your friends a couple of turkeys with the money you'll get for catching those crooks."

Am I jubilant? "In that case," I says, turning to Hardshell, "I will buy you a box of cigars."

"Be sure they ain't nickel ones," Hardshell comes back. I think that is very mean, but I do not say so. After all, what can a guy expect from his future father-in-law?

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Ethiopia's Iron Pike

By JACK REMINGTON

ETHIOPIA'S storm center is a railroad about 500 miles long which extends from the capital, Addis Ababa, to Jibuti, a port of French Somaliland. I am familiar with this railroad, having been a newspaper reporter in Ethiopia over a long period of time.

Even the war clouds are not new to me. Fifteen years ago I represented several London papers in the field with the Ethiopian allies of Great Britain campaigning against Mad Mullah of Somaliland. Mad Mullah was crushed in 1920, three years after the Ethiopian Railroad was completed.

The facts about this road, so far as I know, have not yet been published in North America, but I am giving them now. Ethiopia's transportation problem is a bone of controversy among the big powers. Premier Mussolini has announced that when his Fascists conquer the barefooted native warriors he will run Italian-built streamline trains on this road. My guess is that the French and British will have something to say about that, inasmuch as the Ethiopian Railroad is a French enterprise originally financed largely by British gold, and part of it runs through a French colony.

This lone railroad is naturally the main artery of communication with the outside world. Monopoly as it is, great things were expected of the Ethiopian Railroad, but somehow it never completely fulfilled expectations. The thing has been a source of almost constant trouble to all concerned since the project was initiated. Up to 1922 it operated at a loss. That was the first year of operation under a new financial arrangement between the company and the French Government and also under a new railroad organization.

Just last winter the Italians demanded a hand in operation of this railroad. The French, to get their approval of a treaty involving French security in Europe, gave Italy several hundred

Ethiopian Soldier Guarding the Special Train of Emperor Haile Selassie

shares of railway stock. It was then that Mussolini's press began telling the world of the proposed streamlined trains for Ethiopia.

Construction started in French Somaliland in 1897. By 1902 the rails had reached Dirre-Daoua, which is now the first overnight stop for passengers traveling by train from the coast to the Ethiopian capital. During the next seven years financial and political difficulties hampered further extension. It was not until 1909 that work started again, and in 1917 the line was completed to Addis Ababa.

That the railroad has not accomplished what had been expected in the development and expansion of trade is, perhaps, because it was constructed from political rather than from commercial considerations. Its course was planned more with an eye to evading engineering difficulties than to trade possibilities. For more than one-third its length the railroad passes through unproductive territory.

In 1902, when the line had only just reached Dirre-Daoua—less than half its total length—its locomotives were sadly in need of repair. During trips, stops would be made to tighten nuts; frequently when drawing heavy loads the engines would refuse an incline and would have to back up for more tries. As late as 1920 similar incidents occurred. Even today the rolling stock leaves much to be desired.

I DO not wish to minimize the difficulties of railroading in the land of Haile Selassie. Both management and employees have to carry on under conditions which Americans would find intolerable.

Some of the Ethiopian tribes have strange ideas about property rights. The Danakil and the Somali—which figure so prominently in today's news of the Italo-Ethiopian crisis—seem to labor under the impression that the rails, ties and fishplates have been placed there mainly for the purpose of supplying them with materials for knives and spear-heads and that telegraph wires are to be used for making copper bangles and other ornaments.

When these things are stolen, traffic is impeded and there are other unexpected developments. To these breaks in the monotony may be added the periodical disappearance of large portions of roadbed dur-

ing the rainy season (mid-June to late in September). On one occasion the line had given way adjacent to the great Hawash bridge. The travelers, amid rain and mud, had to clamber across a bridge never intended by its builders for pedestrian traffic; and with their hearts in their mouths they watched the swirling torrent below—incidentally inhabited by crocodiles—while making their way to another train on the far side.

I recall another occasion, when a raiding party of Danakil tribesmen descended on the line, cut down eight or ten kilometers of copper wire, loaded it on a caravan of animals they had brought up for the purpose, and then disappeared. I accompanied a commission of investigators sent to look into the matter. While the commissioners were hard at their labors, I saw another crowd of Danakils return, pull up twenty-five iron telegraph poles, and cart them away on mules and ponies, just to show how easily it could be done.

Many decrees have thundered out denunciations of the crimes, threatening all sorts of penalties, and even menacing with imprisonment persons found wearing bangles of copper wire. Most of these decrees are fruitless. No later than June, 1935, a special train carrying Emperor Haile Selassie just missed being wrecked as track-walkers discovered that a few lengths of rail had been removed and carted away by natives!

At one time it was thought the thefts of telegraph wire could be minimized by substituting iron for the original copper wire. This no doubt annoyed the Danakils, for they pulled down lengthy sections of the iron wire and signified their disgust by cutting it into short lengths and leaving it there.

The Ethiopian Railroad is probably the only one in the world that is used for hunting lions. I once accompanied the present Emperor and a party of distinguished European visitors on a lion hunt by rail. The locomotive engineer had been instructed to slow down in the event any big game was sighted. After a number of futile lags and stops, a lion was sighted about forty yards from the right-of-way, gazing at the train in mild interest. Amid great excitement the engine was pulled up. The Emperor (at the time governor of Harrar Province) and the Europeans seized their rifles and prepared for the fray. In the excitement, one of the soldiers aboard the train accidentally discharged his gun, and the lion

Somewhat Similar to Trains Which Run on the Ethiopian Railroad Is "The White Express" (Shown Here), the Fastest One on the Sahara Desert. She Covers 100 Miles in Nine Hours —if No Sandstorm Is Blowing!

disappeared into the bush. The party was obliged to return minus the king of beasts. Later the excitable soldier had leisure to regret his impetuosity during a period of imprisonment.

In Ethiopia, Water Is So Scarce That Railroad Stations Provide This Kind of Arrangement for Passengers to Wash Their Hands

THERE is a letter postal system operating from the coast to Addis Ababa twice a week, in addition to military messages, but there is no distribution of letters in the capital. The post-office there operates on the cafeteria plan, with everybody fetching his own mail. The parcel-post service to Jibuti got so bad at one time that it was suspended.

Jibuti is only ten days by mail and passenger boats from France and Italy, yet even before the war crisis it took parcels several months to reach the capital of Ethiopia from European points. When they did arrive they were generally in a disgraceful condition, having been " explored " en route, and usually some portion of the contents extracted.

I have mentioned the telegraph line along the railroad. The Italians had a telegraph line by way of Kasala, which is quite satisfactory, when the line is working, but prior to the war preparations it was frequently out of order.

The Italian legation is also equipped with wireless.

Express trains between Jibuti and Addis Ababa make the run over night, but in normal times they operate only once a week. Now, of course, the railroad is worked to the limit in transporting troops and munitions. At one time no night trains were operated on the line because of removal of rails by the wild tribesmen or fear of washouts during the rains. The night runs were revived in 1932 to handle the crowds that attended the coronation ceremonies of Haile Selassi at Addis Ababa. Ordinarily the traveler from the coast to the capital goes by the day train, which makes two trips each way in one week.

At Jibuti, where you board the train on coming off the boats, the climate is not unhealthy but it is abominably hot, and in the months of the southwest monsoon it is unbearably so. The French have planted a few trees there, installed electric lights and built a new hotel.

Jibuti is clean and bright-looking, but ordinarily contains little of interest except the Somali native quarter and the camel and other markets, which are not very different from those of any small East African village. At the present time, however, it is choked with thousands of refugees from Ethiopia. Also French colonial troops hastily summoned from Madagascar, reporters, camera men, bustling officials, air-

plane and munitions salesmen, many kinds of adventurers. From a desolate outpost baking in the sun on the Red Sea, the capital of French Somaliland has suddenly become one of the foremost centers of the East!

As an entrance to Ethiopia, the town of Jibuti is deceptive. Its arid wastes give no promise of the wonderful land that lies beyond. Once through this gateway, the country begins to change. Gradually, as the train continues upgrade during the day, the memory of the morning's journey seems but a nightmare. For many miles the train runs through that hot and dreadful desert which is French Somaliland—just rocks and sand, sand and rocks, parched and cracked by the sun, unrelieved by water or vegetation, a forbidding area.

And then the puffing locomotive pulls our train into the frontier station of Daounle. This is a funny, little, primitive place, over which flies the Ethiopian tricolor of green, red and yellow stripes. Flanking it on one side is a tiny French fort perched up on top of a hill and on the other side is a square concrete pillar marking the boundary line between the French colony and Ethiopia.

AFTER going through the customs here, the train continues to carry us onward through an amazing country. The land for miles seems to have been rent and twisted by great convulsions of nature.

Great masses of volcanic rock are piled one on the other. Huge clefts and fissures show their raw rough edges as if split by some gigantic ax. There are brown, red and black rocks, all piled and mixed together, like a vast battlefield of Titans. And on to the west, rising out of all this chaos, is a miniature Ethiopia.

There are hundreds of hills, cone-shaped and pointed, leading on to larger flat-topped hills beyond, typifying on a small scale the mountain ranges and the plateaus which constitute our goal. As we get among them the great crags seem to look down in silent wonder and contempt at the desecrating audacity of the fussy little train puffing along at their feet.

The passenger who is glad to leave Jibuti is equally delighted to reach the first night's halt at Dirre-Daoua, a pleasant little town about 4,000 feet above sea level, which was for years the railroad terminus. The iron trail, incidentally, misses the old Moslem capital city, Harrar, thirty-five miles southeast.

Even before the war clouds descended, Dirre-Daoua was a flourishing place. It contains a number of well-built houses erected originally for the large number of officials and others engaged in building the railroad. This attracted traders, and the city now has a number of Indian and Arab merchants. It also has a branch of the Bank of Ethiopia. The streets are sprinkled, trees and shrubs are planted along the main streets, and the hotel—before it was overcrowded by army officers—was able to provide the dusty and train-weary traveler with a bath and an excellently cooked meal.

Mountain scenery south of this place is beautiful. To the north stretches the great plain of the Hawash and its tributaries—that strange river which rises west of Addis Ababa, flows for several hundred miles half way across Ethiopia, and then loses itself in the desert before it can reach the Red Sea.

The second day's journey of the train is along the foot of the Tchertcher Mountains to a suspension bridge* over the Hawash River, leaving the great peaks of Mt. Afdam and Mt. Assabot to the north.

Twisting in and out through gorges and over ravines, now hugging the side of a cliff with a sheer drop of thousands of feet on the far side, now brushing its way through vegetation that sweeps the sides of the coaches, and again climbing grades that seem so steep as to threaten a stop

** A picture of this bridge, on which are a puffing engine and train, appears on an Ethiopian postage stamp (valued at ¼ gersh, 2c), Chas. Corwin says in a recent issue of "The Lionel Railroad Magazine." The bridge ordinarily is very high above the meandering stream, but engineers designing this structure had to take in account the fact that while the Hawash is only 4 or 5 feet deep in the dry season, it could suddenly turn into a 50-foot raging torrent.*

The Warriors of Ethiopia Are Barefooted, as This Photo Shows. We Hope They Don't Have to Walk on Cinders of the Roadbed

at every moment, the train at last drops down an incline to the primitive little station of Hawash.

Hawash is a mere collection of huts surrounded by dense bush, in the center of which is a rest house glorified by the name of Buffet et Hôtel de L'Aouache. This hotel is much improved since I first made its acquaintance. I recall that the original bath consisted of a tin pan fastened near the roof of a shed. Water trickled through holes as the bather pulled a string—that is, if any water was handy.

Hawash is much frequented by sportsmen who begin their *safaris* from here in quest of game. Residents of Addis Ababa who feel it necessary to drop down a few thousand feet for rest as a result of too

lengthy sojourns in the great altitude of the capital, often spend their vacations at Hawash. The place is a haunt of mosquitoes, as is Dirre-Daoua, but these pests are not found in the Ethiopian capital.

THE third and last day's rail journey is by far the the most pleasant, even though one must arise before 6 a.m. The train climbs 5,400 feet that day, which is no mean task. More and more rugged grows the scenery as the train jogs along.

At the little wayside halts, which generally consist of a few hovels, the Ethiopian in his *chamma,* accompanied by his beloved rifle, gradually takes the place of the Somali in his bright-colored cotton clothing and the Danakil with his dirty covering of rags, his tousled hair topped with a wooden pin or comb, and his long, evil-looking spear.

Native bread, eggs, sugar cane, live ducks, chickens, guinea-hens and even small gazelles are brought up for sale at these stopping-places. Bargaining proceeds amid a perfect babel of sound until the scream from the engine and many jerks of the train again start us up the ever-steepening grade. Little naked children scamper along the line begging for *piastres* when we pull out.

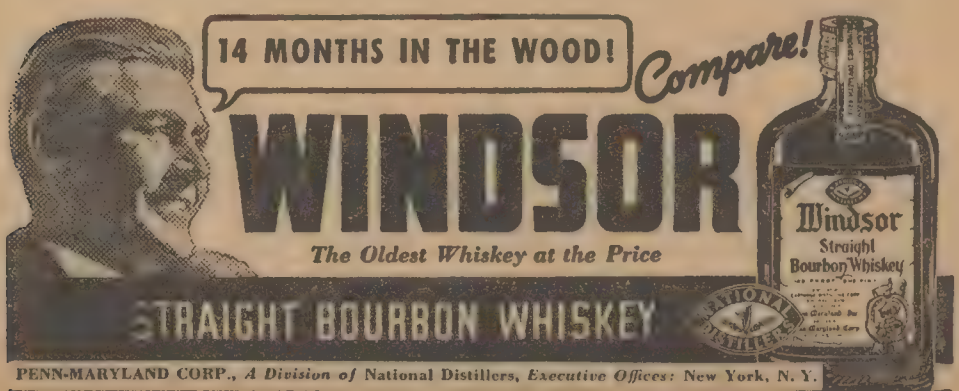
Cultivation becomes more plentiful, villages more numerous as we approach the capital. Then one is dropped heavily back into the past almost on the outskirts of Addis Ababa by sighting from the train windows the hills thickly studded with caves in which people are living—a possible survival of the cave-dwellers of thousands of years ago!

After a few last twists and turns, the train runs into Addis Ababa, nestling in the eucalyptus forests at the foot of the Entoto hills; and in the midst of an excited, shouting throng of many races we endeavor to pick out our baggage and find means of transport to the hotel.

There are camels for the heavy luggage, Gourages (slaves) for the light stuff, mules for the Ethiopians, ponies for the Europeans, and now a few motor cars for the more wealthy.

Amid a picturesque procession of Ethiopians, Gallas, Gourages, Somalis, Indians, Greeks Syrians and Armenians on horseback, on mules, on camels and on foot, resplendent in their many-colored turbans and costumes, we make our way to the hotel through the long avenue of green grass and gum trees that constitute the roads in Ethiopia's capital.

At least, we would be doing such things if we were visiting the empire of Haile Selassie in peace time. But with legions marching, and a grim specter of world war in the background, the pleasant little iron pike of Ethiopia is today a well-guarded military highway. Whether or not the Italian Black Shirts will run their streamline trains over its glinting rails is for the future to determine.



This advertisement is not intended to offer alcoholic beverages for sale or delivery in any state or community where the advertising, sale or use thereof is unlawful.

YOU have printed several letters objecting to the "rude" language of trainmen and others. All we need now is a Christian Endeavor emblem on the front cover where the N.R.A. eagle used to be.

Bar me from the magazine if you will, I still insist that the men who operate the steam lines—in the Far West, at least—are red-blooded rails who don't hesitate to call the hoghead or the brains what they sometimes are, when occasions demand.

The critics never saw a link and pin, nor heard, far up a long string of cars on a winter's night with a blizzard blowing, while he worked "in the field" and coupled up the cars cut from the drag and kicked down to him, the eerie cry: "Jaaaaney wit' a bald head," indicating that the car coming down to him through the darkness was shy link and pin, and was one of those new automatic couplers that sometimes worked and sometimes didn't, or "old-timer wit' a hot pin," indicating an ordinary drawbar with a bent iron pin in the hole in the drawbar.

The men who did that kind of work weren't, as a rule, men who said their prayers every night and ate dainty little sandwiches with girl stenogs at the corner drugstore.

I don't believe that any of our critics who object to profanity ever flagged a train from the cross-arm of a telegraph pole where he had been chased by a red bull who had evil thoughts regarding man, tossing the lighted fusees onto the main, on a crisp, frosty dawn. Well, I did that. When the varnished cars came along and the bull left the scene, I slid down the pole and picked big slivers from my anatomy, and said—well, never mind. You wouldn't print it, anyhow. That hogger said my language laid over anything *he* had ever heard in 40 years of railroading.

Probably there aren't as many old-timers reading RAILROAD STORIES as there are young squirts who would head into a siding and call for help if the air played out. The modern trainman thinks a brake club is something to wave at Agnes as he rolls by the farm, and to protect himself from the rude bums who ride in empty box cars.

What did the old-time shacks do with the money they collected from 'bos? Put it in the collection box Sunday morning. Oh, yeah?

The old-timers are passing fast. The young-timers may think they are getting just as much thrill out of their ramblings as we did; but I doubt it. They can't reach out into new country where the track is creeping over the prairies or through the mountains. They can't realize the hard-fisted, gun-toting bunch who fought at the drop of the hat and gave no quarter, nor expected any if they lost. Yet "The Boomer Trail" brings memories to me and lots of other old-timers. Occasionally I see a familiar name, and run across someone I knew, through that department.

The boomer clerk is extinct. He built an organization of men, got their pay rated as a man's pay, and then they kicked him out. The brothers made no provision for him in their agreements with the railroad companies. On the contrary, they stipulated employment for the "home guard" exclusively, where possible, to the astonishment and delight of the companies who had steadily fought him for 30 years or more while he taught the office men their power *en masse*.

And it wasn't altogether because the boomer clerk was a rude, uncouth fellow. He had finished his job, and when he saw what he had sacrificed for—he hung his head in shame and faded away along the golden path toward the setting sun. Let us hope he arrived in time to shove his tired feet under the table for a "square," ere the cold night closed down.

In a letter from the editor of RAILROAD STORIES I was told that the magazine was endeavoring, in a measure, to get away from wrecks. Yea, brother—the railroads are trying to do that, too. But it can't be done.

I missed Dellinger in the Oct. issue. I know the New Mexico country where he lives, and there is a vague stirring in my memory as he describes some of those spots. New Mexico is a weird, eerie country, full of ghosts of the past. I've had some lively times there, on the Texas side, punching cattle as well as railroading—long, long ago, in the '90's, when all the towns ran "wide open," and you carried your gun where you could get it without going home and digging it out of the trunk. Dellinger has some unusual interpretations of sounds, too, and some original expressions that are refreshing and forceful.—E. A. WAMSLEY, 12930 San Vicente Blvd., Los Angeles, Calif.

* * *

WILL the T.P.&W. (Warsaw Div.) brakeman who gave a 'bo some pie and sandwiches May 30, 1904, write to him now? The 'bo was then on his way from Peoria to Warsaw, Ill., looking for kinsfolk. He found them.—C. E. COOPER, 1302 Hill Ave., Valdosta, Ga.

* * *

I'M seeking an uncle, Rosco Wilson, last heard of as commissary agent, S.P.&S., at Spokane, Wash., in 1914. He also cooked for survey gangs locating railroads.—CORP. A. G. WILSON, 303 E. 11th St., Junction City, Kan.

TRUE TALES OF THE RAILS

Actual Happenings Told by Eye Witnesses

When Villa Crossed the Border

By E. P. TUMA

BACK in 1915 No. 1 was the day passenger local of the St. Louis, Brownsville & Mexico (now Mo. P.) between Houston and Brownsville, Texas. It left Houston about 7 A.M. and was due in Brownsville around 11 P.M., the distance between the two points being 372 miles.* In those days, the schedule was arranged to allow plenty of time to make the numerous stops to unload express consigned to the general merchandise stores located at "blind sidings" along the line, as well as to allow for many miles of bad track. Each crew was sure to get a handful of slow orders on every trip.

On this particular day, October 18, No. 1 had arrived at Kingsville, the division point, about on time, or 6 P.M. Engine No. 10, a 4-4-0 type, had been assigned to the train on its last leg of the journey with Harry Kendall as engineer and B. B. Woodall as fireman. Pat Horan was the conductor and "Doc" Sturck the colored brakeman. (At that time only one brakeman was used on passenger trains, and acted both as brakeman and porter.) The train left Kingsville at 6.20 P.M. for the remaining 119 miles of its run.

Mexico had been in turmoil for two years. A revolution had overthrown the government, and robbery flourished with no interference from the law. Bands of desperadoes sprung up everywhere. They enlarged their operations by crossing the Rio Grande into the United States, and would pilfer stores or ranches in outlying districts under cover of darkness and recross the river into Mexico.

American citizens living along the river demanded protection. An appeal was made to the government to station soldiers from Fort Brown at points liable to be raided by bandits. Soldiers were camped at various places along the river and these forces were supplemented with Texas Rangers, border patrol and other officers experienced on the border. For a time these raids stopped and everything was quiet. Then came a rumor the bandits were planning to wreck and loot a St. L. B. & M. passenger train.

Railroad officals became uneasy as passengers cried for protection. A request was made by officials for soldiers to guard their passenger trains. The officials at Fort Brown agreed to the request and guards were detailed to ride all passenger trains between Brownsville and Kingsville.

** This same train is now No. 11, and it leaves Houston 12.01 P.M. and arrives at Brownsville 11.35 P.M.*

They were kept on trains for several weeks, but nothing more was heard of the proposed raid. Soon the rumors seemed groundless, and on Saturday, October 16th, 1915, all guards were removed.

Before No. 1 had reached the yard limit board in Kingsville, Conductor Horan had begun collecting tickets on his train. Among the few passengers were a soldier, two or three women and children, and some Mexican women. Travel was usually light on Monday.

However, Engineer Kendall had a slow order on some bad track through the sand hills just out of Turcotte. Before he had reached Harlingen they were running fifteen minutes late. The track south of Harlingen was in fair condition and Kendall expected to make up the time. He whistled through Olmito at 10.35 P.M., running about fifty miles an hour, when he saw one of the rails about a hundred feet ahead of his engine suddenly jerk out of place.

"Look at that!" Kendall yelled to Fireman Woodall, at the same time applying the air in emergency. But it was too late. Engine 10 hit the gap and rolled over on its right side. Kendall was pinned under the engine and Woodall was thrown against the boilerhead and stunned. Live steam spurted into the cab, badly scalding the fireman.

When the engine struck the disjointed rail, not a soul could be seen. No sooner was the engine ditched than a gang of Mexicans, armed with pistols and rifles, jumped out from their hiding places. They swarmed about the baggage cars and coaches, yelling and shouting, with their leader giving sharp commands in Spanish. Several of the thugs rushed to the wrecked engine with drawn pistols.

ENTERING the coaches, the leader spied Conductor Horan and began shouting, "Kill him! Kill him!" Horan rushed back to the end of the coach with several robbers in hot pursuit. In the confusion, he outdistanced them and hid behind the stove. After a hurried search, the bandits gave him up and turned their attention to the passengers. About half the gang stood guard on the outside of the train.

They grabbed an unarmed American soldier who was a passenger. With his revolver jammed against the man, the bandit chief spoke in fair English with a snarling grin, "You fine guard. No gun, huh? Fine soldier. Give you one minute say prayer."

"Can't you see I am not a guard?" pleaded the soldier. "I have no gun. Don't kill me. I will do anything you say, but please don't shoot."

The bandit scowled.

"Pancho Villa no ask *gringo* for nothing. Adios, *gringo*." With this, he pulled the trigger and the helpless soldier fell with a bullet in his back.

The leader kept giving curt orders to his men, who had now lined up the passengers and were stripping them of their valuables. All was confusion. Men were pleading for their lives, women were hysterical, while the desperadoes roughly yanked them around. "Pancho Villa," as he dubbed himself, only laughed when a woman was abused or a man clubbed over the head by one of his henchmen.

"Give me *dinero, pronto,*" demanded the bandit chief to a doctor as he punched him in the stomach with his gun.

"Here's all I've got, but please don't shoot," begged the doctor, as he handed over his purse.

"Pancho Villa no like weak man,"

Photo from Joseph Lavelle, 4615 66th St., Woodside, L. I., N. Y.

No. 11 of the St. L. B. & M., One of the Same Series of Baldwin-Built Eight-Wheelers as No. 10. She Had 17 x 24-Inch Cylinders, 62-Inch Drivers, 180 Lbs. Pressure, Weighed 92,910 Lbs.

sneered the leader, pumping a bullet into the doctor as he spoke.

Two passengers took refuge in the toilet of one of the coaches but not quick enough to escape the bandits' eyes. Quick to suspicion they were hiding valuables, several of the robbers rushed after them and demanded they open the door. When no response came, they attempted to kick the door down, and failing, fired several shots through it. The men inside were struck and seriously wounded.

One passenger of Brownsville had boarded the train at Raymondville with several hundred dollars in his possession. When he saw the bandits entering the coaches, he dived under a seat occupied by two Mexican women and hid there until the bandits left.

About ten minutes after they had entered the coaches, the dusky leader gave the word, and his men backed from the cars and joined their comrades who were on guard outside. Mounting their horses, which others of the gang had brought from the brush, they galloped off toward Mexico.

With the aid of several cool-headed men, Conductor Horan quickly quieted the passengers and dispatched Sturck to a farmhouse to telephone officials of the wreck and robbery. Soldiers from nearby camps, aided by every available civilian officer and hastily formed posses, began trailing the bandits, but the band made good their escape. Several suspects were taken, and it is said many were "tried, convicted and sentenced" on the spot. Most people agreed the bandits were members of a highly organized gang which was an offshoot of Pancho Villa's revolutionary army.

A check of the injured and killed showed that Engineer Kendall was crushed to death under his engine and could not be extricated. Fireman Woodall was badly scalded and injured. He had got out of the cab, but did not know how. Two passengers were dead, three seriously shot and several had cuts and bruises from clubbing. A doctor and an army ambulance arrived and moved the dead and severely injured to Brownsville. The others who were hurt were given first aid and, with the rest of the passengers, were carried to their destinations.

The wrecker did not arrive from Kingsville until the next morning. It was thirteen hours before Kendall's body could be extricated. The investigation showed the bandits had removed the spikes from one length of

rail, attached wires to it, and left it in place until the train was almost upon it. Then they pulled it out.

This raid, along with the one at Columbus, N. M., almost caused war between the United States and Mexico. Thousands of troops were rushed to the border, many entering Mexico in an effort to catch Villa and his bands. While the wrecking of the train caused serious injuries to three people and resulted in untimely deaths of three others, it was a boon for the railroad, resulting in heavy troop and supply movements.

Conductor Horan served as conductor until about 1923, when he was pensioned. He died in 1933. Doc Sturck's whereabouts are unknown. Woodall is still in the service of the St. L. B. & M. as locomotive engineer. And Pancho Villa is dead.

The Missing Tool Check

By JAMES DEEGAN

ONE of the American boomer's greatest stamping grounds was old Mexico, where for a long while almost any fairly good engineman could get a job. Among the Mexican roads I worked for was the Interoceanic, whose narrow-gage line runs between Mexico City and Vera Cruz. That part of the road between Vera Cruz and Jalapa, 131 kilometers (82 miles), enjoyed the dubious title of "Yellow Fever Division." It was a perfect nickname. However, the division had one good point: enginemen working on it were paid high wages. For example, I used to draw $12.50 a day for two round trips on the mountain helper job.

Although there was a lot of gold and silver in Mexico, the most precious element seemed to be iron. It was almost impossible to retain any loose iron on an engine, and about the only way to keep tools from being stolen was to pay a guard more than they were worth to watch them.

I hired out at Puebla, and I got an inkling of the tool problem on my first day, when I took a cripple to the back shop and brought back a passenger engine. Finding no monkey wrench on the mill, I went to the super of motive power and asked for one. He led me to a big safe, took out a package, and carefully unwrapped a dilapidated old monkey wrench not half so good as many we used to throw away "for the good of the service" up in the States.

"Now, young man," he said to me, "for your sake and for my sake and for Pete's sake, bring back that wrench. I don't care about the engine or what becomes of it, but save the wrench."

Astounded, I nevertheless promised to do so and signed a tool check for it. These tool checks were not tool checks; they were mortgages. When an engineer signed them he agreed to pay the "value" of the tool if it was not returned. Later on, for example, I was assessed seven dollars for a car chain I had lost. I remember that one Mexican engineer who had been in

several wrecks and thus had paid for many destroyed parts sued the company when he left the service, and the judge ordered the railroad to deliver to him the engine that he had paid for and now rightfully owned. This put a damper on the tool check racket.

When I arrived at Jalapa I checked the tools with my list to the regular man. I unlocked a tank box and showed him some equipment, then took him down to the side of the tank and showed him some more. By the time I went back to the cab I found that the ash hoe had already disappeared! I had not yet attained the wisdom of the brakemen, who, whenever they set out a car there, gathered up all links, pins, and loose iron and locked them up in the caboose. I also found out that they even had to disconnect the air hoses, for the natives were in the habit of swiping them, splitting them and making sandals of them with a piece of twine or wire.

The foreman at Jalapa was an Englishman named Kewley. He despised all Americans, particularly engineers. He declared that when he referred to the States for an engineer's record, in every single instance the reply was that said hoghead was a horse thief, a drunkard or an anarchist. Finally he gave up in disgust and quit writing to the States.

ABOUT that time there was a yellow fever epidemic, and I had little to do. Some American contractors were building a piece of track out of Vera Cruz and had rented one of our engines, so Kewley sent me down to Vera Cruz with No. 9 and orders to bring back No. 35, which had been condemned. Before I left he reminded me of the importance of the tool check, and told me to be sure and get it signed and returned to him. He explained that the contractors had reported that the 35 had no equipment, and it was up to me to return the tool check proving No. 9 had some or to make good the loss myself.

I took the light engine over the division with only a native fireman who couldn't speak English to help me. I had no pilot, conductor, flagman, and was thus entirely responsible for whatever happened.

At Vera Cruz I did not see the other engineer, and he left no work report, so when I arrived back at Jalapa I looked it over and decided to make some kind of report about its condition. First filling out my trip tickets, I placed the tool checks under them and went to the foreman's office to enter my work report in the work book. I met the chief clerk as soon as I stepped in, and handed him the trip ticket and tool checks. A lot of men were standing around. It was all I could do to remember the work on the engine, what with all the questions they were shooting at me.

Finally I struggled through the report and went home to bed. Soon I was awakened by the call boy who announced that old man Kewley wanted me at once. I found Kewley up in the air.

"Did you get the tool check list signed?" he barked.

"Yes," I said.

"Where in hell is it?" he asked.

"I gave it to your chief clerk."

"Didn't I tell you to give it to me?"

"Sure, but as your clerk handles your correspondence, I thought it was the same thing as giving it to you," I explained.

Finally I returned to bed, but had no sooner lain down when I got another summons from Kewley.

"My clerk," said Kewley, nodding in the direction of his Mexican hireling, "says he has not got the tool check. Where is it?"

I protested. The clerk seemed very embarrassed, and when I tried to get an explanation from him, he shut up like a clam and muttered something in Spanish about not knowing. I afterwards learned that he had got stung several times on tool checks and was now laying off them.

Several days later Kewley told me the contractors had reported that there was no equipment on No. 9, and that if we only had the tool check we could show them up. Where was the missing tool check?

That very day, when I went for my washing, the woman handed me a bunch of running orders she had found in my overall pocket. Among them was the missing tool check. I realized then that I had given it to the chief clerk, and that as soon as he saw it he promptly returned it. However, I was so busy answering questions and trying to remember the work reports that I had absentmindedly put it in my pocket.

I went into a huddle with myself. What to do? For me to turn in the tool check now would be an admission of my guilt in trying to get away with something. Finally I tore it up, told Kewley to jump in the lake, and let him charge me up with the missing tools.

Memories of an Old Train Dispatcher

By WILLIAM HOWE OVERLEY

THE 124-mile single track division was full of trains that night. The dispatcher bent over his train sheet to record an OS. He was feeling good. Bill Meadors had made Morehead for No. 24. The old hogger had wheedled the dispatcher into giving him five minutes on the time of 24 there.

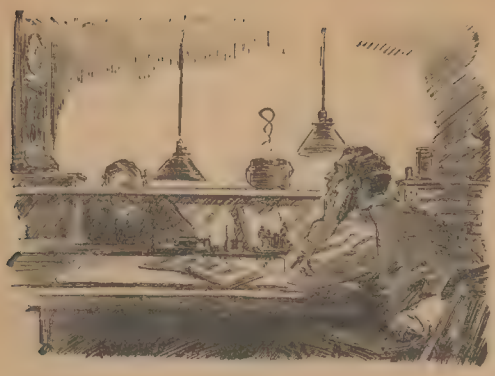
"All I need's clearing time," Bill had said. "I won't delay them a minute."

As a matter of fact, he didn't.

Bill was pulling high-class merchandise, and, as usual, was making a fast run. When he headed in at Morehead for 24 the dispatcher gave him an order to "meet Extra 675 East at Winchester."

Bill didn't say anything. He knew this was contrary to special instructions. Inferior freights should be moved against his pet freight run by time orders only. But Bill knew his dispatcher; knew exactly what the man was figuring on doing. At Winchester, eighteen miles east of Netherland, the terminal yard at Lexington, a "19" order would be passed up to him in a hoop. That "19" order would annul the meet order, and would give extra 675 east time at the various sidings between Winchester and Netherland.

Soon after 95 left Morehead, which is forty-seven miles east of Win-



chester, the operator at Netherland reported that extra 675 east was about ready to leave.

"Buck Watkins wants to know," the op added, "where you figure on getting him for Ninety-five. Says tell you he's got a mile of rattlers and can't get into the clear any place between here and Winchester." Buck was engineer on the 675.

Now, that old hogger and the train dispatcher happened to be special buddies. The dispatcher invariably tried to give him all the best of it at meeting points. But in this case, if he let that meet stand and anything happened to delay that fast manifest train, there'd be hell to pay.

"How soon can they get out of the yard?" the dispatcher asked.

"Be pulling out of the east switch in ten minutes," the operator replied after a moment's delay.

The dispatcher still hesitated.

"Ask Buck if that old wench is steaming. Pat Finn had her last trip west and she didn't seem to do so good."

"Buck says that's because she doesn't like Irishmen," were the words the operator ticked back after a brief pause. "Says tell you he'll be in the clear at Winchester thirty-five minutes from right now if you want to let this meet order stand."

Buck had read the order lying on the operator's table.

Another short pause and the operator went on:

"Pete Eggleton's here now. Says tell you he's ready. The Six-seventy-five is here in front of the office. All he's got to do is ride her to the east end, hook her on and highball."

Pete was the conductor. The dispatcher hesitated no longer. Who the hell was running these trains anyhow? He was.

Pete signed the order. It was completed, delivered, and he and Buck ran for the engine, climbed aboard and beat it for the east end, a quarter of a mile away.

The dispatcher got busy with other trains. It was not until thirty minutes later that he called on Netherland to report on the 675.

"She is still up there in the east end," was what the operator told him.

"My good gosh a'mighty!" Those are not the exact words the dispatcher used, but they'll do.

"Where's your yard engine?"

"Gone around the belt to switch the connections," said the operator.

"Here, take this order," the dispatcher snapped. Then he called Winchester and put out this order:

No. 95 meet extra 675 east at Netherland instead of Winchester.

After both operators had repeated, the dispatcher said to Winchester: "Do not deliver that order to No. 95 until I tell you," and then to Netherland: "If that Pete Eggleton doesn't show up there in a few minutes you'll have to take that order to the east end and get his 'sig.'"

AGAIN the dispatcher became absorbed in other things. Tales of woe began coming in. First 75 was

doubling Corey Hill right in the face of 24. The helper was behind First 75 and 24 needed it tonight. Second 75 had broken in two and run together on Denton Hill, and would be delayed forty minutes getting two crippled cars into the clear. No. 92, eastbound fast freight, was having fire cleaned at Midland coal bins, and would be delayed thirty minutes doing that and taking coal and water.

These delays called for fast work. Many meeting points had to be changed. Time passed quickly. Before all these kinks were straightened out the operator at Netherland again put in his oar.

"The Six-seventy-five has gone back to the shops," was his encouraging piece of news, "just passed the office."

"Has Pete signed that order?" the dispatcher asked.

"Not yet. He's not here. Engine didn't stop here. Went right on down to the shops."

At that moment the operator at Winchester added his bit.

"Ninety-five is coming," was what he said.

"Hold Ninety-five; you understand?"

"Hold Ninety-five," the operator repeated, "O.K."

"NS," the dispatcher said, "get Eggleton and get him quick and have him sign that order so I can let Ninety-five leave Winchester."

"He's not here," was the reply, "but you can turn Ninety-five loose at Winchester. I've got the red out. Engine's back in the shop. Can't get past my red board."

Now, that operator at "NS" was an old head—a good man and a reliable one. If the 675 were back in the shops it couldn't possibly get by his red board, just as he said.

Then the operator at Winchester horned in again.

"Ninety-five is here," he announced, "Bill Meadors standing here at my window. Says tell you to turn him loose. You're delaying the hot stuff."

The operator was wise to the situation and had explained to Bill. The old hogger understood exactly how matters stood. And yet he was perfectly willing to take the word of the operator at Netherland that the 675 was back in the shop.

The dispatcher wasn't. Often he took chances. But the chances he took were chances of delaying a train and getting bawled out by the super, and never a chance that would maybe get somebody killed. Still, in this case, it did look foolish to hold that fast freight train at Winchester when a perfectly reliable, seasoned old-time operator was positive the 675 was back in the shops.

"NS," said the dispatcher, "did you see the number on that engine as she passed your office?"

"Sure I saw it," was the instant reply. "You think I'd say so if I didn't *know*, and maybe get somebody killed? You know there's a street light here in front of the office. I saw six-seven-five in box car letters on her tank."

The dispatcher was sorely tempted. If he turned that 95 loose now, he could cover up the slight delay. Ten minutes more and he couldn't. Ten minutes more meant the super would

fairly take him to task for deliberately disobeying his special instructions. All right, let him, the dispatcher suddenly decided. He would not break a hard and fast rule he had made for himself never to take a chance that might get somebody hurt.

These thoughts had flashed through his mind. A second later he said to Netherland:

"Just the same, Ninety-five is not going to leave Winchester until Pete Eggleton signs that order. It's up to you. Call the roundhouse. See if that conductor went back to the shops with his engine. If not, you'll have to walk to the east end and get him."

There was a three minutes' wait.

Then came the excited words from Winchester: "I hear him coming."

"You mean Extra Six-seventy-five East is coming?" the dispatcher asked.

"Yes."

Netherland, who had overheard this, broke in.

"That can't possibly be; it must be a L. & N. train he hears. I can't get the roundhouse on phone; I'll try again."

"Go outside and look. Make sure," the dispatcher ordered Winchester.

Another wait, and then:

"By gosh, it's her all right," said Winchester. "I could see the number on her headlight. She's heading up through the passing track now."

WHAT had happened was this: when the 675 came to be looked over on her westbound arrival the previous day a cracked flange was discovered on one of her tank wheels. A big piece was ready to drop out. Pressed for time, the shop foreman had switched tanks with a yard engine. The lettering on the tank the 675 got had been changed. Later a new pair of wheels had been put under the other tank and it was hooked onto the yard engine. But the lettering was not changed!

Instead of going to the belt line to switch the connections as the operator had thought she had, the yard engine had gone to the east end to give the Extra East a boost out of the yards. It was this yard engine returning, with a tank reading 675, that the operator had seen.

As you probably are aware, I was the dispatcher that night. Bill Meadors is still running on that division, and the same operator is at Netherland.

Boys, do you remember the incident? If you do, drop me a line to 531 Eastland Ave., Akron, Ohio.

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The Sunny Side of the Track

AN OLD-TIMER RECALLS

TOO bad the Raquette Lake R.R. has been abandoned. During vacation months the R. L. crew made 2 round trips a day between Carter and Raquette Lake, N. Y., 18 miles. Tourists regarded Conductor John Rank, "Old John," as part of the Adirondack Mountain scenery, and always looked for the tall, lean figure with a corncob pipe.

On one of his trips a fussy old maid with a dog got on the train. The only seat left was next to a gentleman smoking a big "seegar." She demanded that he stop, but the man continued to smoke contentedly. In desperation she yanked the cigar from his mouth and threw it out the window. Enraged, the man retaliated by throwing her little white poodle after the cigar.

At Carter the lady barged out to Old John and demanded her poodle.

"Madam," said he, pointing back up the track, "there's yur dawg!"

Around the curve, believe it or not, came the poodle with the cigar in his mouth!

Old John tells another one of an extra trip he made to Carter one night before electric headlights were in use. Rolling down Bald Mt. in the fireman's seat of engine No. 2, John thought he saw a bear crossing the track, a usual sight in those times. At Carter he walked ahead to report in. There on the footstep of the pilot sat Mr. Bruin. One leg was cocked over the other, and the bear was holding a white oil marker in his left paw, pouring out signal oil for his bruised hind leg!—L. R. Herns, 22 Cherry St., Malone, N. Y.

* * *

YES, IT REALLY HAPPENED

BALDWIN JONES, trainman, arrived in Lynchburg at 9.45 p. m. Having several hours to wait for N.&W. Train 15, he decided to take a nap. When he awoke, Train 15 had gone. So Jones had to wait for Train No. 1, due several hours later. He decided to take another nap, and when he awoke this time he found he had missed Train 1. The trainman then went back home, slept all day and caught Train 15 the next day.—N. & W. Magazine.

TALENTED SWITCH ENGINE

A SUFFERER who lives near a railroad yard wrote this complaint to the company:

"Gentlemen: Why is it that your switch engine has to ding and dong and fizz and spit and bang and hiss and pant and grate and grind and puff and bump and chug and hoot and toot and whistle and wheeze and jar and jerk and howl and snarl and puff and growl and thump and boom and clash and jolt and screech and snort and slam and throb and roar and rattle and yell and smoke and smell and shriek like hell all night long?"—From scrapbook of J. K. French, 456 Pine Ave. W., Montreal, Canada.

* * *

LINES TO A BUS

THE poets may sing of the flowers
But I'm in a humor to cuss,
And I want to sing of a horrible thing—
An overnight ride in a bus.

Some who had tried it warned me
While others declared it was nice,
But I never heard of any fool bird
Who ever attempted it twice.

My seat o'er the wheel was slanting
And harder it grew by the mile,
Sometimes when we stopped, I gracefully dropped
And lay for a while in the aisle.

Oft when we stopped by the roadside,
At some place not on the map,
I got out to eat, some guy got my seat
And I had to hang by a strap.

Now I'm telling you how I feel,
If you disagree we won't fuss,
You do as you like, I'd rather hitch-hike
Than try again on a bus.

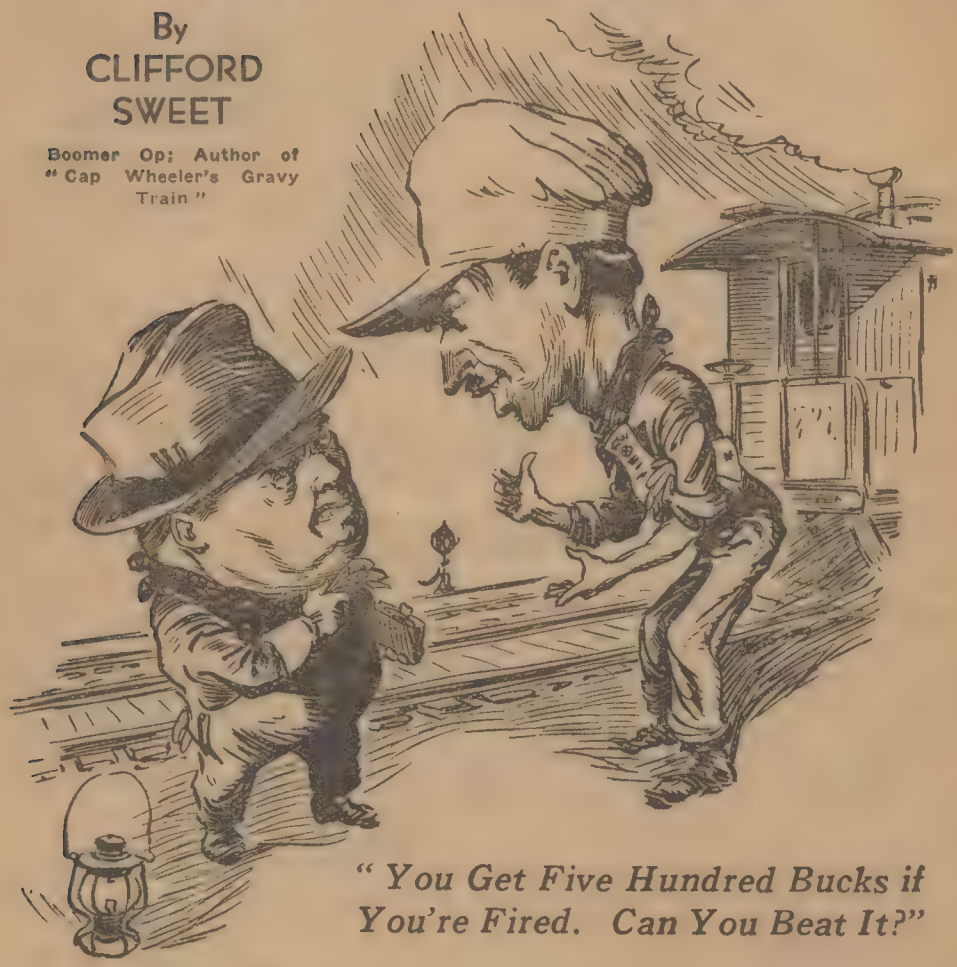
No matter what type the road is,
Good sand-clay, cement or gravel,
This thing is true, and I'm telling you,
It's a helluva way to travel!

—E. A. Hill, Mobile, Ala.

Job Insurance

By
CLIFFORD
SWEET

Boomer Op; Author of "Cap Wheeler's Gravy Train"



"You Get Five Hundred Bucks if You're Fired. Can You Beat It?"

"EVERY railroad man oughta carry job insurance these days." Brakeman "Leatherneck" Jones kicked the caboose door shut with his heel and hauled a wad of advertising matter from his jumper pocket. "Take you, for instance, Sam. If you got fired tonight, could you feed your family till you got another?"

Conductor Sam Tutt stopped writing up waybills long enough to glance up and ask: "Another what, family?"

"It says here," Leatherneck continued heedlessly, quoting in part from a small pamphlet, "this here company will pay any man five hundred dollars if he gets fired. Can you beat that?"

As he thought about it Jones shook his head in amazement. He realized with terrible suddenness what a terrific economic loss he had suffered in the past. He had been fired off dozens of the best railroads in the country.

As was his wont, he merely skimmed the highlights in this new-found boon

to railroaders. To take the time necessary to explore every little whereas and aforesaid in the sample policy that accompanied the literature would be a needless waste of time.

He squared things around on Sam's desk to make a place to write and filled in one of the application blanks, a formal request for a five-hundred-dollar job insurance policy. In scanning the pamphlet for the address, he made another discovery. They wanted agents!

"And for every policy an agent writes," he read, "he is at liberty to collect and retain as his commission the first month's dues—three dollars."

"Well, fan my brow!" he muttered. Forthwith Jones applied for another policy, and nothing but his growing regard for this company prevented him from asking for a third. He figured that he had earned, and wisely invested, the sum of six dollars all in the space of a few minutes.

Smothering an impulse to lay off, he strolled out and mailed his letter.

The drag which he was called to go out on was stuck for a fruit extra, so he went to the head end and talked "Tub" Hancock, the head man, into taking one of the policies.

Tub surveyed the other charily as he extracted three one dollar bills from a lean wallet.

"S'pose the cockeyed stuff's any good?" he paused to ask. "The woods is full of chiselers these days."

"Don't be a tomato," Leatherneck exclaimed. "Didn't I just take two of these policies myself?" As it dawned on him that this money he was removing from Tub's fingers was all profit, he muttered something under his breath and astounded the other by shoving the money back.

"Now what?" Tub yelped, aroused to suspicion by this unexpected change of front. "Don't I get the policy?" Tub was worried lest something good might be getting away from him.

"Sure you'll get it." Leatherneck's gaze was following a yellow light that was swinging their way out of the gloom. "Better get on the job," he warned, "or it's liable to go into effect right now. Here comes that assistant yardmaster that loves you."

The two trainmen left hurriedly, Tub in the direction of the engine, Jones toward the caboose. The two were buddies. Together they had boomed from Portland, Maine, to Tucson, and from Tampa, Florida, to Seattle. What it was that had drawn them together in the first place, and then held them in an unbreakable chain of companionship, would forever remain a mystery. In every way they were as totally unlike as daylight and dark. Leatherneck was tall, thin, and full of the kind of nervous energy that propels a man from one job to another.

Tub, on the other hand, was short and fat. Nothing on earth could make him hurry. He was always hungry and he never had half enough sleep. He liked to take things easy and nothing but his partner's ruthless driving power could ever have made a boomer of him.

BY the time Leatherneck wrote several more of the job insurance policies, he was seriously considering a career as an insurance salesman. In due time he received a bulky envelope which he rightly surmised contained policies for himself and Tub. He, however, received but one, whereas he had applied for two. An enclosed note explained the discrepancy. It read:

You will notice that paragraph B, section 19 reads, "Only one policy per applicant will be written." Keep the good work going.

Tub glanced at his own policy, then negligently shoved it in his jumper pocket. He wondered vaguely if he had overlooked anything else.

They were called that morning for an eleven o'clock hot shot—cantaloupes and melons. Because of the detour via the postoffice, it was 10.50 when they hit the yards. At that instant, the assistant yardmaster came cantering round the string of reefers, to which no engine had yet been attached. When he spied the pair, he stopped.

Leatherneck nudged his partner. "There's your friend. He's throbbin' like a sore toe."

The AYM favored Tub with an angry stare. "Oh, hello, Sweetpea!" His voice dripped sarcasm. Switching suddenly to a rasping snarl, he barked: "Lissen, Shack, you better head for the roundhouse and lead that engine out. If these melons get out late, your hide is comin' off."

"Sweetpea!" Tub gnashed his teeth in disgust as he wheeled and started. "I'll bust that guy some day."

"Yeah. You'll bust him," Leatherneck grinned as he sauntered toward the caboose, looking the train over.

SPRING had come to North Texas. The warm rays of the morning sun filled the air with sticky, energy-sapping languor. Leatherneck Jones, staggering up through the yards with an armload of journal brasses and a bucket of packing dope for the caboose, met Tub Hancock coming out of the switch shanty. Tub, he could see, was in the grip of some emotion stronger than spring fever. One overall strap dangled behind him and he was fingering the knuckles of one hand as if they were fragile pieces of bric-a-brac.

"That—job insurance," he panted, his breath coming in gasps like a spent runner. "If it's any good, you can tell 'em to pay it to yours truly."

Leatherneck uncoiled one long arm and the journal brasses thudded to the cinders. "You mean—"

Tub nodded vigorously. "That smart AYM," he explained, groping for the overall strap, "he yanked a chair out from under me when I went to set down and I poked him."

"So you got yourself fired, huh?"

Tub nodded again.

Leatherneck balanced the dope bucket carefully on a tie end and mopped his streaming face. "I'll have to compliment you on your foresight," he said sarcastically in spite of the fact that he looked pleased. "This is one place we can leave without you bellyaching to settle down."

Tub paused to eye his partner critically.

"So what?"

"So plenty. I'll slap your friend onto his feet. Then we'll both collect our insurance."

Tub captured the elusive strap and, by a painful contortion for one of his bulk, managed to bring it round front. "You can't do that, you sap," Tub growled, hooking the strap to his bib and settling it in place with a shrug.

"Who says I can't?" Leatherneck bristled. "Whatta you think I'm carrying job insurance for?"

"That's all right," Tub mollified. "But we'll have to hang around here two or three weeks to collect our insurance. That'll take money. If we both get fired now, we won't have any credit at the beanery. You've got to work till I collect mine. Then I'll furnish the grub till you get yours. With all your experience," he grinned audaciously, "you won't have no trouble getting fired."

Leatherneck pondered this for sev-

eral minutes. In the end he could see that Tub was right. Although his feet itched to start North, he stuck. It was an economic necessity.

After a sharp warning to Tub to be careful, he made arrangements at the beanery whereby his pal could get meals and cigarettes on his meal ticket. And when he got back in off his run, he pawed through a dresser drawer stuffed with magazines, laundry tickets, razor blades and soiled socks. On a somewhat rumpled claim blank, he made formal application for Tub's insurance.

WITH nothing to do but eat and sleep, Tub put on a few extra pounds. Smoking and drowsing in an easy chair in front of the café where he ate his meals, he performed no exertion more arduous than shifting his chair to follow the shade.

One evening two weeks later, Leatherneck sat on the edge of the bed wearing a petulant frown.

"Gawsh a'mighty!" he groaned despairingly. He was thumbing through a batch of slips which he had just redeemed at the beanery at what seemed to him an outrageous price. "Steak and aigs three times a day!" he exploded. "Didn't you ever hear of anything else?"

Tub, lolling on the far side of the bed in his underclothing, smiled indulgently. "With five hundred smackers a-comin' to me? Don't forget in a few days you'll be loafin' and I'll be footin' the bills."

Leatherneck grinned guiltily and tossed the slips in a dresser drawer. This damned sticky weather was getting his goat, he guessed. Bundling his partner's soiled clothing which had been accumulating for two weeks, he contritely carried it to the laundry.

Returning by way of the postoffice, he was agreeably surprised to find a letter for Tub. Yes, from the insurance company. Hurrying back to the room, he broke the seal in Tub's presence and removed a letter but no check.

"That's funny." He scratched his had in perplexity. "Where's the check?"

Tub hoisted himself to one elbow.

"Read it, you sap. Don't stand there lookin' like a burnt fusee."

Somewhat confused, Leatherneck read aloud:

> **According to your claim application, you were discharged for striking a superior officer of your company. If you will read paragraph A, section 4 of your policy, you will see that we are not liable when a policy holder is discharged for insubordination or violation of rule G.**

Tub fell back on the bed with a howl of rage. "So that's what you call job insurance, huh?"

Leatherneck, for once, had nothing to say. His partner, instead of being an asset, had turned into a liability who consumed steak and eggs like a drunken sailor. Besides, a new light had been shed on his own problem. If he was going to be able to collect on his own policy, he would have to think of some legitimate way of getting fired. Pasting the AYM had cost Tub five hundred dollars. However much he might dislike the AYM, the price was too high.

Since Tub's dismissal Leatherneck had been braking ahead. He handled the switch list. At Gramercy, next trip, he deliberately set out two cars of rush flour that belonged at Colon and knocked a car of seed potatoes off center while doing it. When the crew returned to Stigler, Conductor Sam Tutt was hauled onto the carpet. Be-

cause he knew of no irregularity in the switching at Gramercy, his record was charged with ten demerit marks.

"For indifferent supervision of your crew," he was curtly told.

"Git to hell outta my sight!" the enraged conductor bellowed when Jones tried to horn in and take the blame. "Don't come whinnying around me."

Leatherneck tried at the division office to get his just deserts, but was shunted out of there without being allowed to state his case.

Determined to make the company fire him, he fractured every rule of the company his agile brain could think of. Purposely he showed up late on call twice. He pushed a car of coal off the end of a spur track at Colon and, in desperation, threw away a handful of waybills.

But what Fate didn't cover up for him, well meaning friends did.

"This danged road," he complained bitterly one morning, "wouldn't fire a man for nothing short of murder."

BUT they did. They fired a switchman for dropping a car which turned out to have no hand brakes. He held one of Leatherneck's job insurance policies. Being a boomer, the switchman spent his last cent on a riproaring spree, then calmly sat down to await the arrival of his five hundred dollars.

Leatherneck squirmed and turned pale when he read the letter that came back from the insurance company.

Evidently you have never taken the time to read one of our policies through. Paragraph C, section 16, reads, "No applicant can collect the face of his policy unless he has been steadily employed for at least one year at time of his dismissal." You should explain this feature to your policy holders and avoid dissatisfaction.

The switchman had been working three months. The things he swore he would do to Leatherneck Jones the instant he laid eyes on him kept that harried gentleman on the dodge until the switchman departed for greener pastures.

Tub laughed sarcastically. "If that's job insurance, I'll eat my shirt. How long you been in the service, yourself, Bubber?"

Leatherneck wadded the letter into a ball and fired it under the bed. "Looks to me like a gyp outfit," he growled, evading Tub's question.

"Who?" Tub affected innocence. "The insurance company or their agent?"

His partner was too sunk in gloom to take offense.

"The company's on the square," Tub continued, defensively. "That old head they fired outta the car department got his five hundred bucks O.K. He didn't happen to sock nobody nor get drunk. And he'd been workin' for the railroad a lot longer than any year. How long did you say you'd been in the service?"

Leatherneck grinned sheepishly. "Two more weeks and I'll be over the dead line," he replied.

Tub hauled a desperate looking pack of cigarettes from his jumper pocket and started fumbling for a match.

"Two weeks to go, eh?" He eyed his partner derisively. "I have to laugh every time I think about h o w hard you've been trying to get fired."

Leatherneck squirmed in embarrassment.

"Aw, how was I to know about that trick clause where you had to work a year before you could collect?"

"You wouldn't," Tub replied, "because you never take time to l o o k things over."

"It don't make any difference now," the other returned shortly. "What's done is done. Just watch my smoke these next two weeks."

"So what?"

"So plenty. I'm going to watch my step like a home guard. Sweet railroading, that's me. Nobody will get a chance to hang a thing on—"

A sharp rap sounded at the door. Leatherneck broke off and yelped, "Come in."

The door flew open. A call boy shoved a sealed envelope at Leatherneck, then backed out.

The brakeman stared at his name typed on the envelope.

"Whatta you suppose this is now?" he pondered.

"Why don't you read it and see?"

Leatherneck tore open the envelope and removed a typed sheet of few lines. He glanced hurriedly through its contents, then turned to stare in stony silence at a particularly hot and dusty scene outside.

"Well, is it a secret?" Tub asked.

The other started, then dragged his gaze back inside.

"It says I'm fired," he replied sorrowfully. "For sellin' insurance on company time."

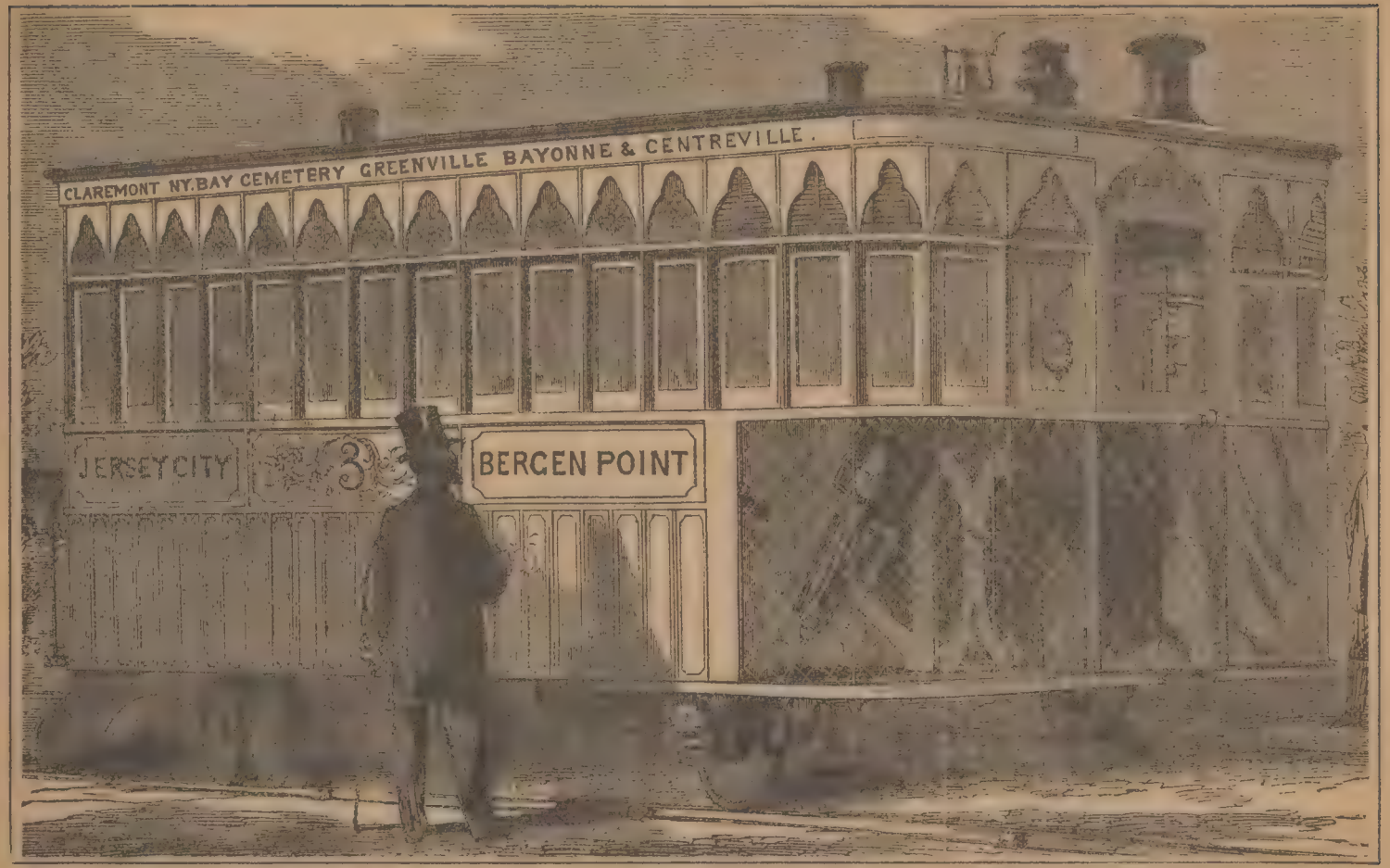
Tub's expression was a mixture of sarcasm and amusement. Before he could give it word, the yodel of an engine whistle down around the interlocking plant drifted in to their ears.

Leatherneck's shoulders squared and all trace of care blew off his face.

"Cantaloupe train," he said cryptically, his head cocked in the direction of the sound. "They'll be heading North in less than an hour. That's all the job insurance we need."

One Way to Get Passengers

"You Fellows Might Just as Well Come Inside. There's Nobody in Here Anyway"



Old Print from Collection of A. S. Pennoyer

"Dummy" Steam Engine Used in 1863, Long Before Modern Electric Street Cars Were Dreamed of. Because It Was "Safer, More Reliable and More Economical Than Horse-Power," Its Enthusiasts Claimed, "It Promises to Supersede the Use of Horse-Power, and We Hope to See It Universally Adopted"

By the Light of the Lantern

Ask us what you want to know

RAILROAD questions are answered here without charge, but these rules must be observed:

(1) Not more than two questions at a time. No queries about employment.

(2) Always enclose a self-addressed, stamped envelope, to facilitate our getting in touch with you if necessary. We will print only your initials.

(3) Don't be disappointed if answers do not appear at once. They are printed two months before date of issue.

WHAT is the shortest distance in which a passenger train traveling 60 miles an hour can be stopped without derailing? A freight train?—R. S., York, Pa.

On good, level, straight track, with equipment and locomotive brakes in first-class shape, a steam passenger train traveling 60 m.p.h. will not be likely to derail when halted in the shortest distance in which it is possible to make a stop. That distance is not less than 1,000 feet. Under ordinary conditions, of course, a train traveling at such a rate is not brought to a halt so abruptly, and the engineer will use at least two or three times that distance. Because of the fact that its braking power is considerably less than that of a passenger train, because its length keeps it from responding to brake line pressure changes as rapidly, and because its equipment is more easily derailed, a freight train (under the above-mentioned conditions) cannot be stopped safely in anywhere near a thousand feet. Half again or even twice as much space is needed.

I HAVE heard that the Pennsylvania RR has a trackless switcher. Where, why, and how is it used?—A. B., Philadelphia.

The PRR operates five such devices at Baltimore, Md., over what is known as the "Block Route," which starts at Jail Yard, near Calvert Station, and extends along Monument St. and Central Ave. to City Block and the area near President Station, with a spur to Jackson Wharf. This route uses paved city streets, and consequently an old city ordinance provided that no steam locomotives should ever be operated over the main parts of the line. Until 1917 the cars were handled by drafts of Percheron horses—usually from six to ten together. That year the horses were replaced by tractors which are powered by two electric motors driven by six-cylinder gas engines. Equipped with hard rubber tires, they are independent of the tracks. They use air brakes and, of course, regular couplers. Photo on page 82.

WHY can't steam railroads use single point switches (only one point moves; the other remains stationary) as some street railways do? (2) *Why can't steam be substituted for air in air brake systems?*—C. V., Philadelphia.

(1) They could, but why should they? Except at very low speeds single point switches are dangerous; and since it is always necessary for a man to throw a railroad switch on the ground, there would be no reason for the type of switch so common on street car lines.

(2) Obviously the steam would condense and the pressure would drop. In cold weather you'd be lucky to have any pressure at all. Steam has been and still is used for locomotive brakes, but it can hardly be piped back to the cars and used there.

CAN the driving wheels of a steam locomotive be spun backward by reversing the engine after the brakes have been applied by opening an angle-cock on the train line?—F. A. T., Abilene, Tex.

Since a sudden opening of the train line is equivalent to an emergency application of the brakes, and since an emergency application of the driver brakes is sufficient to lock the wheels no matter how wide the throttle and valves are open, it stands to reason that the drivers cannot be spun backward under the circumstances you describe.

This Strange-Looking Rig, Believe It or Not, Is an Honest-to-Gosh Locomotive, and It and Four Others Like It Are Operated by the Pennsylvania in Baltimore, Md. However, It Doesn't Use Tracks, but Runs on Hard Rubber Tires. See Answer to A. B. (Page 31) for Further Information

WHAT is the most powerful 4-8-4 type locomotive?

(2) *What is the Shay gear on an engine?*—W. M. D., Bethel, Conn.

(1) Using tractive force of engine alone as the standard of power, the most powerful 4-8-4 type at the time we went to press was the 1631-1650 series of the Lackawanna, which exerts 72,000 lbs. t.f. However, the 3000 series of the Chicago & North Western, in our opinion, deserves the honor, since it not only has a theoretical t.f. rating practically as high (71,800 lbs.), but also is equipped with larger drivers, much larger boiler, weighs considerably more, and actually exerts more t.f. with booster (84,200 lbs.). Both these engines may be surpassed very soon, since the Chesapeake & Ohio has ordered five 4-8-4's from Lima Locomotive Works which, according to advance publicity, will be the most powerful of their type in the world.

(2) You are probably thinking of the Shay type locomotive, which employs a gearing system to obtain greater power than would be otherwise generated by an engine its size. Two or three cylinders are arranged vertically on the right side of the boiler, and these are direct-connected to a horizontal drive shaft which is geared to each axle of the two or more four-wheel trucks (wheels of which are from 20 to 46 inches in diameter). To offset the great weight on the right side, the boiler is set to the left just enough to balance the engine perfectly. Shay-geared engines are used a great deal by industrial and logging companies, which must haul high tonnage at low speed on light tracks around sharp curves and up steep grades. It is not well suited for main line service because of its low maximum speed (about 20 miles an hour).

H. M. L., Erie, Pa.—A short history of the Huntingdon & Broad Top Mountain RR appeared on page 82 of our Sept., '35, issue.

ARE the side rods of the Milwaukee's "Hiawatha" engines equipped with roller bearings?

(2) *When will the roster of the Burlington Route be printed?*—F. E. S., E. Peoria, Ill.

(1) No. However, the main and side rods on these locomotives are novel in design. Of light weight, I-beam construction, they are connected in the tandem style; that is, the main rod is forked on the main pin, and the side rod is fitted on the pin between the forks of the main rod.

(2) We don't know, since we haven't scheduled it yet. We don't attempt to announce the rosters more than three months ahead, for we want the information to be strictly up to date when it is printed.

C. R., Cincinnati.—Stating that a railroad is going into a receivership is just another way of saying that it is broke—that it cannot pay either its current operating bills or the interest on its bonds, or both. We haven't space to go into the subject of receivership (you can find

all you want to know about it in any library), but suffice to say that the purpose of a receivership is to reorganize the road, usually by scaling down its capitalization and its fixed charges. Which is to say, the stockholders lose part or most of their investment, and certain bondholders some of the interest or even part of the face value of their bonds.

(2) The Santa Maria Valley RR, which runs from Guadalupe to Roadamite, Calif., 23 miles, was inc. in 1911. It owns only that part of its line from Roadamite to Betteravia, and leases the rest. It has 3 locomotives, 5 cars, and a year ago employed 36 people. Owned by the La Brea Securities Co., its road and equipment are valued at $495,908, and its total assets are $536,995. It made money in 1932 and 1933, but went in the red in 1931 and several preceding years. Photo and specifications of its engine No. 105 were printed on page 85 of our March, '34, issue.

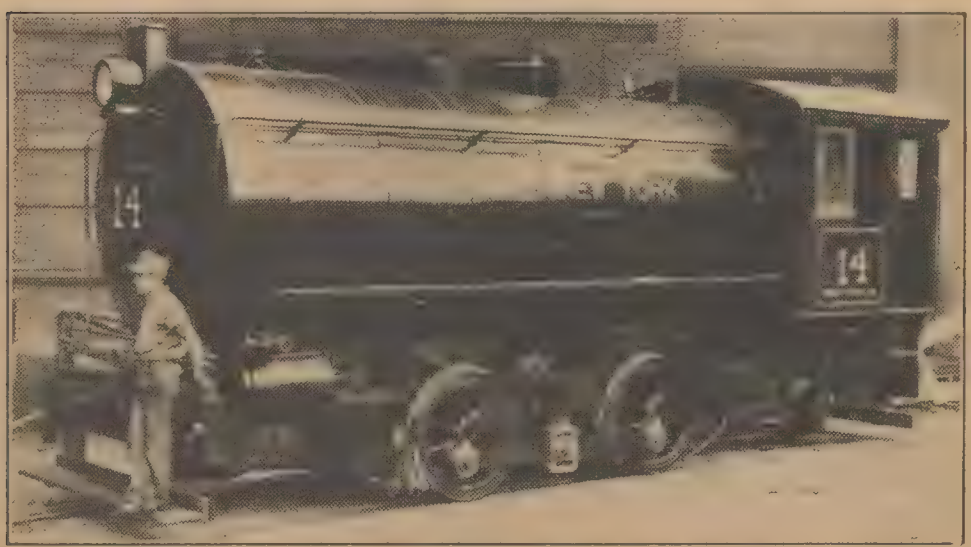
Free Booklet

THE Pullman Co. has issued an elaborate 20-page, 8 by 11-inch booklet entitled "Pullman Accommodations." It tells the story of Pullman service, describing each type of Pullman accommodation, is lavishly illustrated in two colors, and contains floor plans of different types of Pullman cars. A copy will be sent free to any reader writing to Mr. George A. Kelly, vice president, the Pullman Co., 79 E. Adams St., Chicago, Ill. Mention this magazine, but do not write to us.

IS there such a thing as a fireless locomotive?—L. B., Springfield, Ill.

Fireless engines are neither new nor particularly scarce, and the idea behind them is very simple. The well-insulated boiler is simply charged with steam at high pressure (220-300 lbs., with the boiler already 60% full of water, to provide for more steam) and by means of a reducing valve the engine is run on 50-65 lbs. pressure. Equipped with large cylinders and small drivers, it is good for industrial and yard switching where the smoke nuisance and fire menace must be eliminated. One man can run it, and its boiler is not costly to maintain. A single charging lasts a half day, and a charged boiler can stand several days without losing all its pressure. We are printing herewith a photo of one recently built by the H. K. Porter Co. (Pittsburgh) for the Brooklyn Navy Yard. On page 39 of our April, '34, issue we printed a photo of one used on the Gulf, Colorado & Santa Fe. The first steam-storage locomotive in America was built by Lima for the National Cash Register Co. more than 25 years ago.

G. C.—The Tonopah & Goldfield RR, which runs between Tonopah Jct. and Tonopah, and Columbia Jct. and Goldfield, Nev., 102 miles, was inc. in 1905 as a consolidation of the Tonopah RR and the Goldfield RR, both of which had just been built. It has 6 locomotives, 61 freight and 3 passengers cars, is owned by the Tonopah



No. 14, a 51½-Ton Fireless Switcher Built by Porter for the Brooklyn Navy Yard. See Answer to L. B.

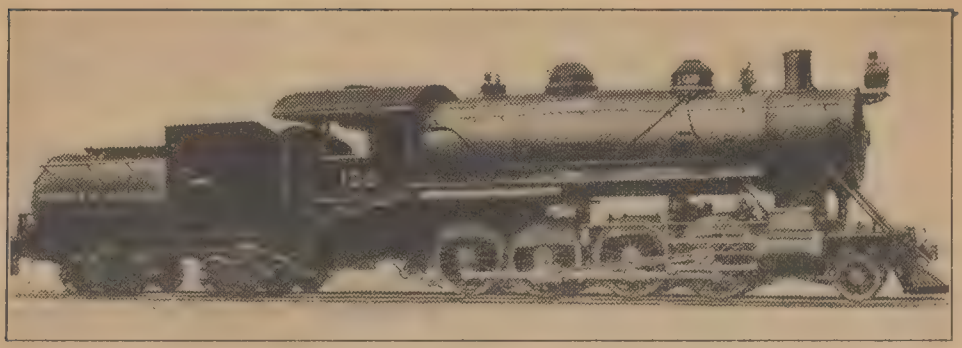


Photo from D. L. Joslyn, 2164 Castro Way, Sacramento, Calif.

No. 102, Consolidation Type Built by Baldwin for the Tonopah & Goldfield Many Years Ago. See Answer to G. C. for History of the T. & G.

Mining Co. It made money for the last six years (except 1930 and 1931). Road and equipment are valued at $3,373,672; total assets are $3,529,728.

W M. C., Chatham, N. J.—The following table sums up the *main* points of difference between the Pacifics of PRR Class K-4s and the two engines of Class K-5 (5698, 5699):

	K-4s	K-5
Cylinders	27 x 28 in.	27 x 30 in.
Pressure	205 lbs.	250 lbs.
Superheater heating surface	943 sq. ft.	1,634 sq. ft.
Weight	308,900 lbs.	318,700 lbs.
Tractive Force	44,460 lbs.	54,675 lbs.

Except for a slightly longer front end on the K-5, the other main dimensions of these engines are practically the same.

(2) There is no automatic safety device to allow steam to escape from a locomotive boiler in case of accident. The blow-off cocks, of course, must be opened by an engineman.

W O. S., Pasadena, Calif.—The old Las Vegas & Tonopah RR, which ran from Las Vegas to Goldfield, Nev., 197 miles, was inc. in 1905, opened from Las Vegas to Indian, Nev., in March, 1906; to Johnnie a couple of months later; and to Goldfield late in 1907. It had 15 locomotives (we have no data on them) and 14 cars; is now abandoned.

(2) The McCloud River RR, which runs from Mt. Shasta to Hambone and Pondosa, Calif., 61 miles, was inc. in 1897. It now has 13 locomotives, 436 cars, and a year ago employed about 45 people. Four of its engines are Baldwin-built Mikados.

G R., E. Orange, N. J.—Although we do not doubt that a railroad called the Paul Smith's RR operates at Paul Smith's, N. Y., it has never been listed as a common carrier, and we can find nothing about it.

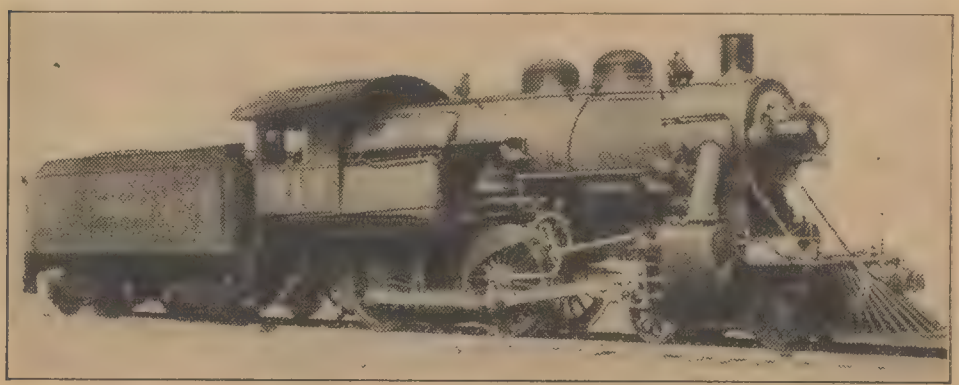


Photo from W. R. Osborne, 38 Colonial Ave., Whitehorse, Trenton, N. J.

This Modern, Superheated Reading Eight-Wheeler and the Other Nine Engines of Her Class (D-11s, Nos. 410-419) Are the Most Powerful 4-4-0 Types in Existence. They Exert 27,580 Lbs. T. F. See Page 80 of Our Aug., '35, Issue for Additional Data

Photo from H. W. Polson, Box 83, Cedar Falls, Iowa.

Back in the Old Days They Used to Wreck 'Em Right! This Little Mishap Occurred at Colo, Iowa, on the Chicago & North Western, About 40 Years Ago, When a Doubleheader Crashed Head-on into an Opposing Train. The Second Engine of the Doubleheader Slid Right Down the Track under the First, and Lifted Her Neatly into the Air

J. T., Chicago.—The Illinois Northern Ry. was inc. in 1901 and was completed a year later. It operates 28 miles of belt line track in Chicago, of which it uses 3½ miles of Santa Fe track at an annual rental of $24,119 plus a third of the gross earnings over $44,218. It has 9 locomotives, 60 cars, and about 145 employees. Despite a comparatively low operating ratio, it has lost money in recent years, due to its high fixed charges. Road and equipment are valued at $966,117; total assets are $1,367,995.

F. O. K., Topeka, Kans.—The Canon City, Florence & Royal Gorge was inc. in 1906 and completed in 1907 to Canon City and the Royal Gorge; that year it was reorganized as the Canon City & Royal Gorge.

L. T. H., Berkeley, Calif.—Only the Virginian Ry. now has a Mallet with two sets of ten-coupled driving wheels. The Santa Fe had one many years ago, but it is no longer in existence.

(2) CPR No. 8000, triple-pressure 2-10-4 type, has one 15½ x 28 and two 24 x 30 cylinders, 63-inch drivers, pressures of 250, 850, and 1,350 lbs., weighs 485,000 lbs. without tender, exerts 90,000 lbs. t.f., was built in 1931. According to latest information in our files, she is still in use (see photo on page 42 of our Aug., '35, issue).

F. T. J.—Supplementing our reply to you the month before last, R. A. Van Tress, 830 S. W. 1st Ave., Portland, Ore., says that the Camas Prairie RR motive power, etc., is owned by the NP, but that OWR&N (UP) crews run them.

HOW much oil does the C&NW's "400" use on a one-way trip between Chicago and St. Paul?—J. K., Buffalo.

The amount has varied between 8 and 10 gals. a mile, depending upon the weather, traffic, etc. With a consumption of 8 gals. a mile, the train would use 3,280 gals. on a complete one-way trip. The tender holds 5,000 gals.

Photo by Robert White

The Track of the Arcata & Mad River R. R. at Glendale, Humboldt County, Calif. Note the Two Rails on the Left Side. The Outer One Is for Standard Gage Equipment, While the Inner Accommodates the Rolling Stock and Motive Power of the A. & M. R., the World's Only Railroad with a Gage of 3 Feet, 9¼ Inches. (See "Our Two Oddest Roads," by W. E. Butler, in the Sept., '34, Issue of This Magazine.)

L. S., Montreal.—On most roads with which we are acquainted wrecking cranes ("big hooks") are not kept under steam. For one thing, there aren't enough wrecks these days to warrant it. For another, the wrecker can be got ready as swiftly as the engine that will pull it.

(2) We are not aware of any "customs" requirements of an engine crossing the U. S.-Canada boundary. On practically all trains doing so the engines are changed at the boundary, but even if they weren't, we see no reason why they should be any different from any other steam locomotives.

ALL things considered, which are the most efficient engines under the conditions of their use: the Jersey Central Mikados or the new Lehigh Valley 4-8-4 types?—X. Y.

The Lehigh Valley engines, by all means. The Jersey Central 2-8-2's are older and slower and do not have as much boiler capacity in proportion to their rated power. They are excellent examples of well-designed Mikados, we'll admit, but they cannot come up to the newer engines in general performance and efficiency.

Additions, Comments and Corrections

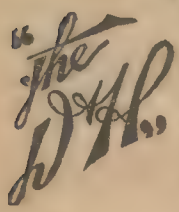
IN the August issue, when replying to H. E. C. of Akron, O., we stated that only four railroads operate on their own tracks all the way between the Mississippi River and the West Coast. We forgot about the Milwaukee Road, which not only operates over its own tracks between the Mississippi and the Pacific, but is also the only one to use its own rails between Chicago and Puget Sound. That makes it five. (We hope nobody else thinks of any more!) The first man to write and tell us about our slip was the Milwaukee's alert traveling freight and passenger agent at Great Falls, Mont., Mr. H. C. Brisbine. Those Milwaukee boys are on the job!

In our roster of the San Diego & Arizona Eastern (July, '35) we gave Baldwin credit for constructing Nos. 105 and 106. According to K. P. Bayne, 751 S. Figueroa St., Los Angeles, Calif., they were built by the SP in 1917 and 1918, respectively, as two of the 2837-2857 series.

Photo from E. R. Byers, 1427 Garfield Ave., Canton, O.

The Old Story—Two Trains Met Where No Meet Was Scheduled. This Mixup Occurred About Twenty Years Ago on the New York Central Between Alliance and Freeburg, O.

The World's Heaviest Rail Shipment



THE heaviest load ever carried on a single railroad car—it weighed 367,000 pounds—is believed to have been the generator shaft, rotor and poles for a 25,000-kilowatt frequency converter set which was shipped last March 22nd from the General Electric Company's plant at Schenectady, N. Y., to Benning, District of Columbia. It was carried by the Delaware & Hudson Railroad for 208 miles as far as Buttonwood (Wilkes-Barre), Pa., where she was turned over to the Pennsy and later to the Western Maryland and the Pennsy again, to be hauled the remainder of the journey. The apparatus was needed at Benning to deliver current to the P.R.R. for trains on its southern end.

Naturally, so huge a shipment had to be planned for months beforehand by the D.&H. operating department. The car on which this converter set was hauled weighs 104,100 pounds. It has four four-wheeled trucks, with a load limit of 197,900 pounds. Total weight of car, blocking and load was 473,900 pounds, slightly more than the heaviest D.&H. locomotive.

The loaded car stood 16 feet 10 inches above the rails and was 12 feet 5½ inches wide, two feet wider than the published clearance of the D.&H. So the operating department had to check carefully the height and width clearances on the entire 208 miles of the proposed journey over the D.&H., and the Pennsy had a similar job for the second half of the trip. A special train was used, consisting of locomotive No. 926, a spacer flat car, the loaded car, another spacer flat car, and a caboose. Special precautions were taken along the route. At Delanson, N. Y., the outer rail of the southbound main track had to be elevated to give sufficient clearance between the load and a standpipe. The special was run over the northward main from Cobleskill station to KF tower to clear cars at the freight house. Over most of the distance between Milepost A-88, just north of Otego, and Milepost A-101, north of Sidney, the unique load would not clear trains on the northward main track, so a milk train had to be held on a siding at Wells Bridge to permit the special to pass. Extreme caution was exercised in crossing the gauntlet bridge at Center Village, where there was about one inch clearance on the west side. A slight sway would have caused a bad accident.

The crew for the special was carefully chosen, consisting of J. P. Hastings, conductor; Thomas Cannon, engineer; E. B. Monroe, fireman; two brakemen and a representative of the General Electric Co. Advance publicity brought out thousands of spectators, including groups of school children and their instructors, who lined the right-of-way of both the D.&H. and the Pennsy at points where the special was scheduled to stop for water or for other purposes. From Buttonwood the record-breaking load was moved over the P.R.R. to Hagerstown, Md., thence via the Western Maryland to Fulton Jct. This detour was necessary because of tunnel clearance limits in Baltimore. It went back to the Pennsy for the balance of the trip to Benning. It arrived safely on Wednesday, having been en route since the preceding Friday.

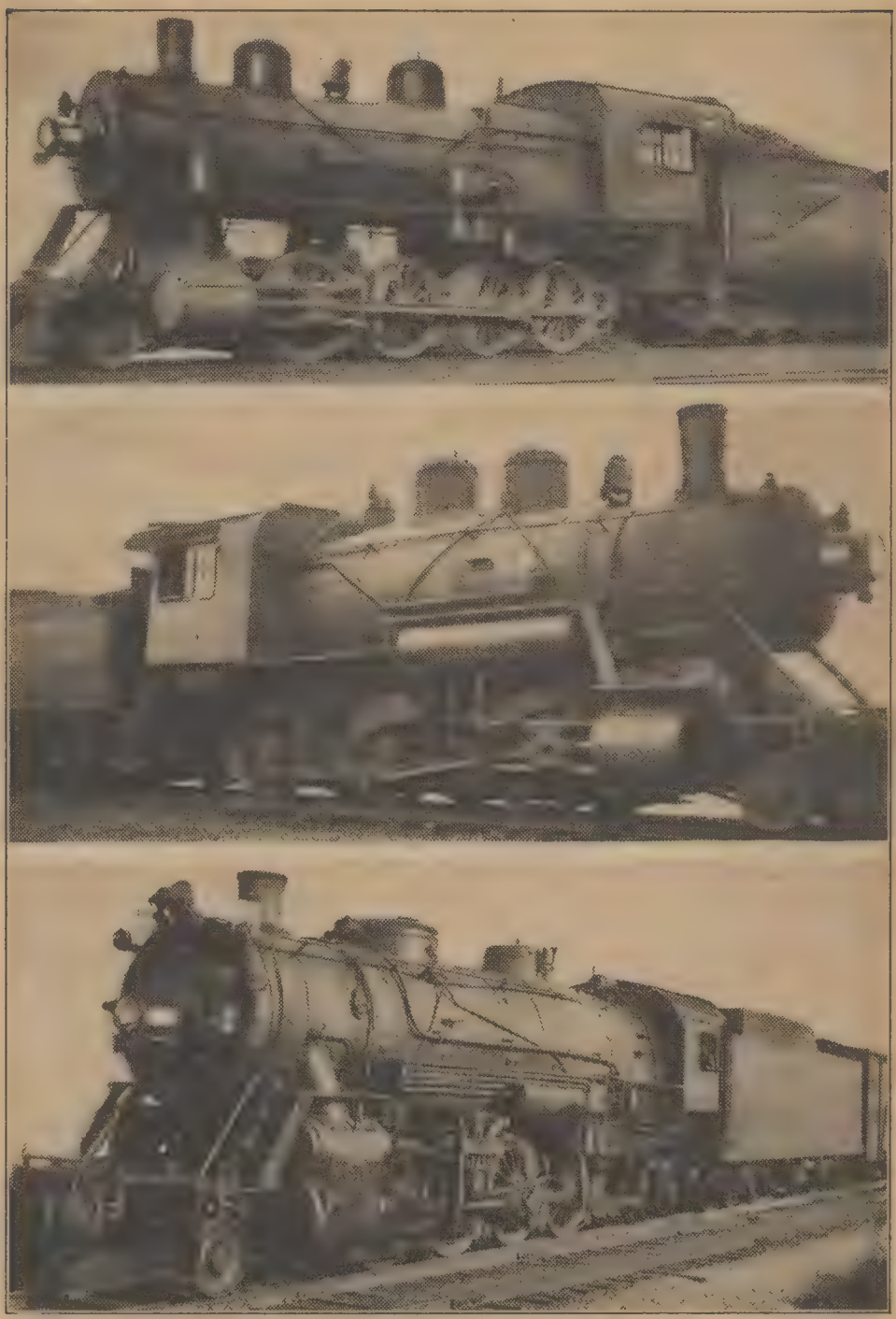
Locomotives of the Pere Marquette Railway

Photo by Railroad Photographs, 5 Appian Way, Allston, Mass.

The "Chicago Limited" of the Pere Marquette, Hauled by No. 713, at Forest Hills, Ill.

THE Pere Marquette Ry. was born in 1899, when the Chicago & West Michigan, the Detroit, Grand Rapids & Western, and the Flint & Pere Marquette railroads merged to form the Pere Marquette RR. Five years later the railroad was acquired and leased for 999 years by the Cincinnati, Hamilton & Dayton (now part of the B&O), but a year after the Pere Marquette went bankrupt in 1905 the CH&D had the lease annulled and relinquished control. In 1907 the railroad was reorganized and consolidated with the Pere Marquette RR of Indiana, and five years later it went into receivership again. Finally, in 1917, the present Pere Marquette Ry. was organized. The next twelve or thirteen years were very prosperous, but since then it has run up deficits.

Class	Engine Numbers	Cylinder Dimensions (Inches)	Driver Diameters (Inches)	Boiler Pressure (Pounds)	Weight without Tender (Pounds)	Tractive Force (Pounds)	Date Built
	Atlantic (4-4-2) Type—Out of Service						
A-4	377, 379, 380, 382-385, 387, 389, 393, 396	19 x 26	73	200	142,000, 150,000	21,900	1902, 04, 05, 10
	American (4-4-0) Type—Out of Service						
E-1	3, 4	18 x 24	67 69	180 180	105,500 105,200	17,800, 17,240	1897
	Mogul (2-6-0) Type						
M	202-213, 216, 217 (13 engines)	19 x 26	57	200	145,500	28,000	1904
	(Nos. 216, 217 have 190 lbs. pressure, 138,500 lbs. weight, 26,600 lbs. t.f., built 1901.)						
MM	219 (out of service)	20 x 26	63	200	166,000	28,100	1903
M-1	224, 225, 227 (out of service)	18 x 30	57	180	144,200	26,100	1898
	Ten-Wheel (4-6-0) Type—Out of Service						
T	152-184 (6 engines)	18 x 24	63	200	135,350	21,000	1902, 03
TA	192-197 (5 engines)	20 x 26	73	200	160,000	24,200	1903
	Consolidation (2-8-0) Type						
C	601-625	22 x 30	61	200	217,500	40,500	1910-11
C-1	351-364 (7 engines)	21 x 26	57	200	181,500	34,200	1903
C-2	274-313 (26 engines), 366-375 (9 engines), 501-512	20 x 28	57	200	172,000-179,000	33,400	1905, 09
	315-350 (21 engines)	20 x 26	57	200	167,100, 168,800	31,000	1903, 04
	(Nos. 330-350 have 195 lbs. pressure, exert 30,200 lbs. t.f., were built 1901, weigh 163,000 lbs.)						
SC	901-925	25 x 30	57	180	236,500	50,400	1911
	Mikado (2-8-2) Type						
MK	1001-1010	27 x 30	63	185	285,000	54,600	1913
MK-1	1011-1040	26 x 30	63	200	292,000	54,800	1919
MK-2	1041-1050	26 x 30	63	200	319,000	54,800	1927
MK-6	1095-1099	28 x 32	63	180	328,600	60,930	1911-13
	Santa Fe (2-10-2) Type						
SF	1101-1115	26 x 32	57	200	321,000	64,500	1918
SF-6	1198, 1199	29 x 32	63	205	374,100	74,435	1919
	Pacific (4-6-2) Type						
P-2	701-705	22 x 26	77	200	216,000	27,800	1910
SP	706-710	22 x 28	77	200	218,000	29,920	1911
SP-2	725-729	25 x 28	73	190	257,000	38,800	1914
SP-3	711-722	23 x 28	77	190	243,000	31,100	1920



Photos by Fred O. Seymour, 1011 Moores River Drive, Lansing, Mich.

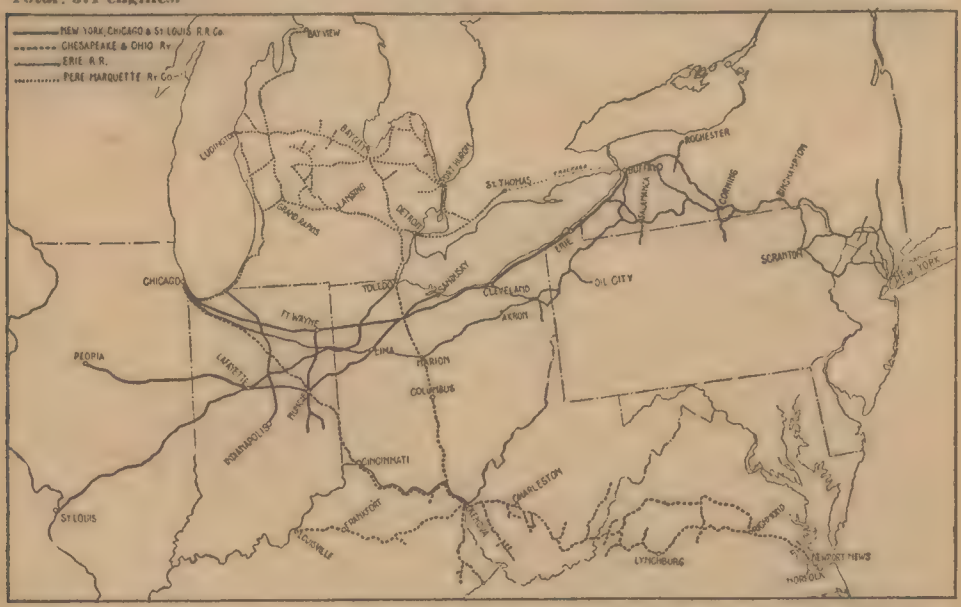
(Top) No. 350 Snapped at Grand Ledge, Mich., Four Years Ago. (Center) No. 209, One of the Old Moguls, at Wyoming Yards, Grand Rapids, Two Years Ago. (Bottom) No. 1019, Photographed at Lansing Recently

Photo by Fred O. Seymour

One of the Old Atlantics Which Never Again Will Pound the Rails—No. 389, Snapped in the Wyoming Yards at Grand Rapids

		Six-Wheel Switcher (0-6-0) Type						
S-2	401–419 (12 engines)	19 x 26	51	170	118,000	26,500	1901, 04
	456–469	19 x 26	51	170	132,000	26,500	1905
	470–484 (14 engines)	20 x 26	51	170	136,000	29,400	1910–11
	499	19 x 26	51	180	112,000	28,158	1903
		Eight-Wheel Switcher (0-8-0) Type						
C-16	240–254	25 x 28	52	200	240,000	57,200	1930
S	1401–1410	25 x 28	51	185	220,000	53,900	1920
S-1	1300–1339	22 x 28	51	200	204,000–220,600	45,200	1918, 23, 29

Total: 371 engines.

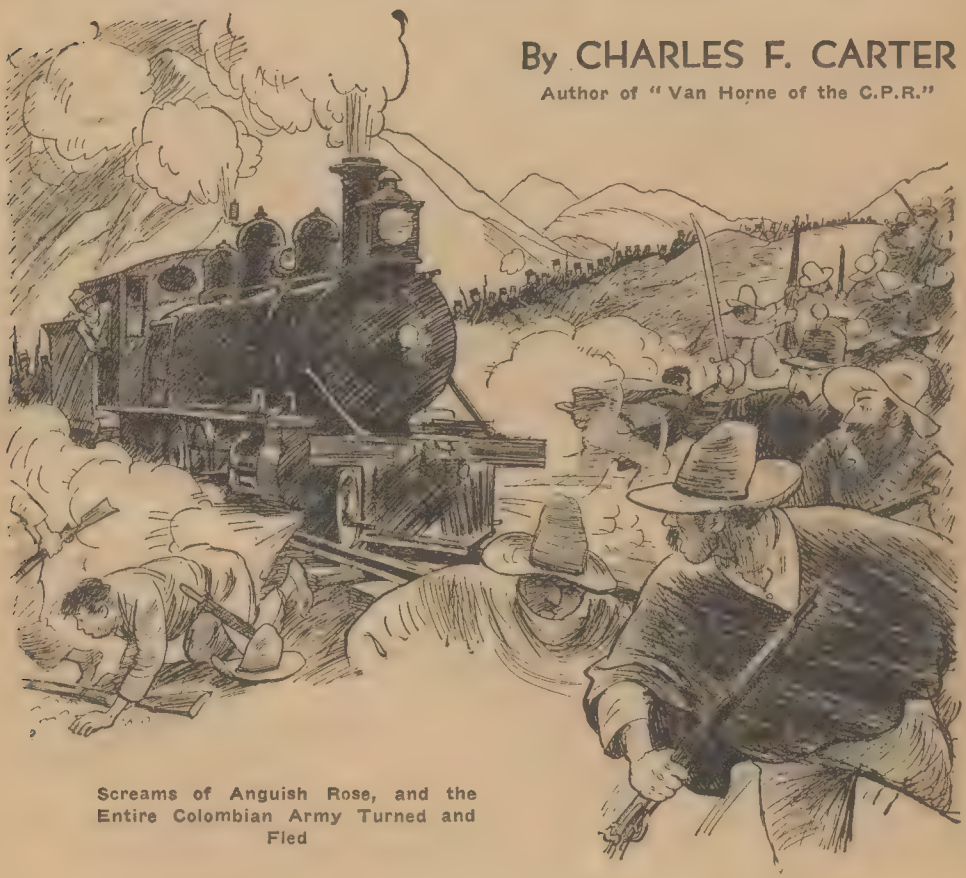


This is the Famous Van Sweringen System of Railroads, Controlled by the Two Silent Brothers of Cleveland, Orls P. and Mantis J. Van Sweringen. The Complete Locomotive Roster of the Nickel Plate (Heavy Line) Appeared in Our April '34 Issue; of the Chesapeake & Ohio (Heavy Dashes) in Our August '34 Issue; and of the Erie (Crossed Line) in Last Month's Number

NEXT MONTH: CENTRAL VERMONT RY.

The Narrow-Gage G. & Q.

By CHARLES F. CARTER
Author of "Van Horne of the C.P.R."



Screams of Anguish Rose, and the Entire Colombian Army Turned and Fled

ON the west coast of South America, right under the Equator, lies the republic of Ecuador, a nation of 1,800,000 people in a triangular, mountainous area about the size of Colorado. Ecuador is not a "new" country. Conquered by the Spanish more than 400 years ago, it was exposed to the "civilization" of Europe long before the Pilgrim Fathers were ever dreamed of.

If any country needed a railroad, when railroads became available, Ecuador was that country. Its capital is Quito, an ancient city of 80,000, located a little less than 300 miles inland from Guayaquil, its chief port. Now, 300 miles wasn't so far in an ordinary country, but in Ecuador it was a terrific distance. Quito is on a high plateau between the first and second range of the Andes Mountains, and to get to it the first range has to be crossed at two miles above sea level. It used to take as much as three weeks to get over the mountains by mule power.

For 340 years, however, Ecuador managed to get along without a railroad. After that several attempts were made to build one, and one company actually finished a few miles of narrow-gage track into the foothills of the Andes. But none of them panned out. As soon as one company got started, it either ran short of cash, or its

The 287-Mile Guayaquil & Quito Ry., One of the Crookedest, Steepest and Toughest Iron Pikes in the World

men died off, or a new revolution started, and the project was abandoned.

Finally, after a series of short-termed leaders, General Eloy Alfaro became president in 1895, and was legally elected "Supreme Chief" two years later. Alfaro's first act on assuming the presidency of Ecuador, even before taking up the urgent religious problem, was to appoint his trusted friend, Luis F. Carbo, minister to the United States, with special instructions to make it his first duty to find the right American to build the long-talked-about railroad from Guayaquil to Quito.

When Carbo arrived in Washington, he looked around for such a railroad builder and found Archer Harman, who was well-known before he was thirty for having built the famous Colorado Midland R.R. through the steep Rocky Mountains of Colorado.

Archer Harman was the son of Col. Archer Harman of Virginia, who served on the staff of General Lee in the Civil War. His family was utterly ruined by the War, and Archer was obliged to work for a living when he was only a boy. His first job, with a railroad contractor, suited him so well that he determined to make railroad construction his life work.

Harman had the good luck to attract attention from C. P. Huntington, head of the Southern Pacific, who sent him on a mission to London. He was so successful that Huntington took special interest in him, introducing him to Abram S. Hewitt and other leading New York financiers.

One result was that before he was thirty years old Harman landed the highly attractive contract for building the Colorado Midland. In addition to substantial profits, Harman acquired practical experience in mountain railroad building which he hoped to turn to advantage in future.

Harman accepted Carbo's offer and took the next steamer for Guayaquil. He bought the best mule he could find there, and he beat the mail carrier bearing Carbo's letter about him by two days!

"You have traveled from Guayaquil to Quito in twelve days, Señor Harman?" exclaimed Alfaro, greeting his visitor.

"Yes, Your Excellency. It is less than three hundred miles."

"Marvelous! No one has ever made the trip in less than fourteen days. Usually it takes fifteen days to three weeks."

"One day would be enough by rail."

"Yes! We must have the railroad. Twelve attempts have been made to build a railroad by former chief executives. French, German, English, native capitalists, have all failed. Pack and riding mules and Indian porters are still our only means of transportation. When I think of those wonderful railroads Señor Meiggs has built in Peru, I have come to believe that nothing is impossible to American engineers. But we must have no more failures. Ecuador's future depends on this railroad; and we shall never be able to make another attempt if we fail for the *thirteenth* time."

"Engineers can do anything, Your Excellency, if their bills are paid."

"Our treasury is empty."

"But your national credit—"

"We have none. Ecuador's bonds are quoted at fifteen cents on the dollar in

No. 19, One of the Eight Consolidation Types Built by Baldwin for the G. & Q. in 1906. They Were Unique in Having Double Cylinders (13½ x 22-Inch) Attached to the Same Cross-head. This Is Why: the Width of the Engines Was Restricted Because of Tight-Fitting Tunnels and Cuts, and in Order to Provide Sufficient Piston Area, Double Cylinders Were Installed, Making the Locomotives Look Like Compounds. Many Years Later They Were Rebuilt with Single Cylinders. They Had 42-Inch Drivers and 200 Lbs. Pressure; Weighed About 225,000 Lbs. with Tender

London. There is no market for them at any price."

That was worth thinking about. However, after a month of discussion an agreement was signed June 14, 1897, between the Republic of Ecuador and Archer Harman, under the terms of which the latter was to build the Guayaquil & Quito.

Harman hurried back to New York, thence to London. In neither city could he raise a nickel for railroad building in Ecuador. But a little thing like that did not stop him. With President Alfaro's approval, Harman refunded the public debt of Ecuador, which was then assumed by the railroad company. Bonds that had gone begging at 15 cents rose to 40 cents and eventually to 66.

Returning Harman hesitated in New York long enough to engage an engineering staff headed by Major John A. Harman, his brother, as chief engineer and general manager, with W. F. Shunk and Henry Davis as engineers of location. At one time the engineering staff numbered 84 men.

Six months later the survey was completed and everything was ready to begin work. Despite their utmost efforts, construction was delayed until February 1, 1899. The time limit for completion of the line to Quito was fixed at June 14, 1903. While work was never stopped for a single day, not until June 17, 1908, did the first construction train roll into the capital.

THE first obstacle to be overcome was an entire lack of labor. Indians from the plateau a mile and a half to two miles above sea level sickened and died in the torrid heat of the coast, or thought they would, which had the same effect.

Harman went to Jamaica where he contracted with the government for any number of Negro laborers up to 10,000. Wages were to be 60 cents a day. The Negroes had to agree to stay two years. Sanitary camps were established for them, medical care and proper food were provided. The engineering and clerical forces were quartered in a separate camp at Huigra, 4,000 feet above sea level. Engineers were provided with mules, the common means of travel, to save their strength and enable them to get about quickly.

The earlier attempts at railroad building had left about fifty miles of track from Duran, across the Guayas river, to Chimbo, at the edge of the foothills. This road had been presented to the new company as the first link in the Guayaquil & Quito Railway.

On examination it turned out to be not so good. It was three feet wide, whereas the G. & Q. was to be forty-two inches. The alignment was bad, the grading was worse, the equipment was worst. However,

in relocating the line, involving heavy construction across a swamp and laying new ties and rails, the old railroad became of practical use in forwarding supplies to the front.

Next was construction of a pack trail for sending material and supplies beyond rail head. Wheeled vehicles were unknown. After that all hands settled down to the plodding drudgery of construction. Steam shovels and pneumatic drills were out of the question. Even the old reliable scraper with which so many thousands of miles of railroad throughout the world have been built could not be used on the almost perpendicular slopes of the Andes. Pick, shovel and wheelbarrow were the only tools available. In the hands of Jamaica Negroes, drawing wages of 60 cents a day under contract, such tools left quite a lot to be desired.

But that wasn't the worst. After working through one or two pay days many of the Negroes felt so rich they wouldn't work again until their money was gone. Also, because labor was scarce in the tropical coast region and sugar planters wanted workers, many were lured away. Harman had to appeal to President Alfaro, who enacted laws making it a misdemeanor to entice workmen from the railroad and ordering the return of those already employed.

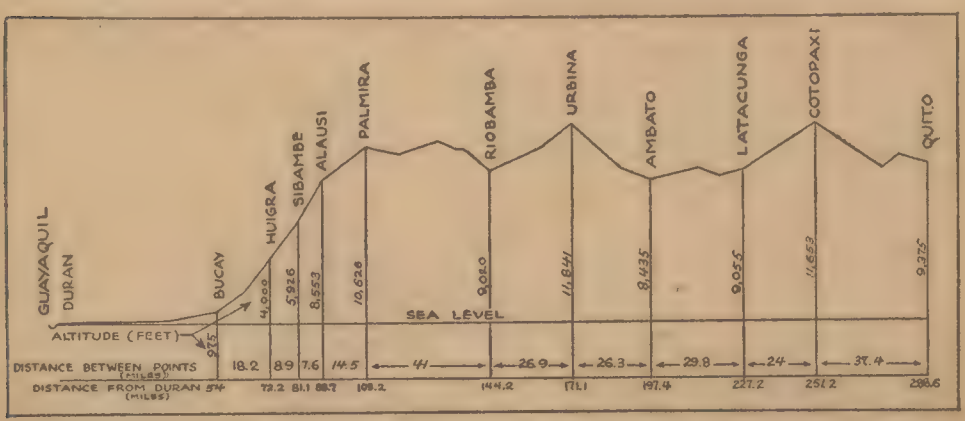
That did not end labor troubles on the Guayaquil & Quito Railway. Many of the Negroes became so troublesome and useless that they had to be discharged. They retaliated by strikes and sabotage.

Nature, too, added what it could to the troubles of the railroad builders. Vampire bats were very fond of mule blood. A few nightly attacks would so weaken the mules that they died. Jaguars, or "American tigers," also liked mules. Their frequent raids on the corrals disturbed the camps and made a heavy drain on the pack and riding stock. Poisonous snakes were so numerous that engineers and workmen had to be constantly on guard. Equus snakes, cousins of the rattlesnake, claimed a number of victims.

Then the climate was trying. Average annual rainfall was twelve feet—not inches, mind you. Heat and humidity in the lower altitudes were oppressive. Then came the wettest season ever known in Ecuador. In one little shower ten inches of rain fell in twenty-four hours, washing away the results of two years' work.

That meant that the railroad builders had to begin at the beginning and do it all over again; but not in the same location; for that meant total failure.

HARMAN, hardest working man on the job, had an alternative plan ready, as a good railroad man should. While keeping a sharp eye on construction and



Profile Map of the Guayaquil & Quito, Showing the Steep Grades on the Line. Between Sibambe and Alausi, 7.6 Miles, It Rises 2,627 Feet, by Means of Switchbacks and 5½% Grades

maintaining contact with the government, he found time to do a lot of exploring. Examination of the Chan Chan gorge convinced him that it should have been the route chosen instead of that insisted upon by the government members of the Railroad Commission.

No. 30, One of the Three Superheated Consolidation Types Built by Baldwin in 1920, Snapped on the Hill at Hulgra. They Have 19 x 22-Inch Cylinders, 42-Inch Drivers, 200 Lbs. Pressure. Weigh 258,000 Lbs. with Tender. In Addition to These and the Consolidation Pictured on Page 93, Baldwin Constructed Eight Moguls for the G. & Q. in 1901, and Two 0-6-6-0's in 1905

As in similar ventures elsewhere, the railroad was supposed to be built under supervision of a board consisting of representatives both of the government and the railroad company. The former, knowing nothing of engineering, naturally wanted their ideas to prevail. For instance, they limited grades to 3 per cent, with a few short stretches of 4 per cent. Unfortunately the Andes were not designed for such grades. Slopes were so precipitous and of such great height that there were few places where there was room for moderate grades.

The Chan Chan was one of the few, but not for 4 per cent. In due time the government consented to a maximum of 5½ per cent, or 290 feet per mile for an almost continuous stretch of fifty miles. Maximum curves of 29 degrees were allowed.

Ten thousand men were turned loose on the new route. Timbers imported from Oregon were dragged by oxen along the finished grade and beyond for temporary bridges during the dry season. On this temporary track Shay locomotives hauled steel for permanent bridges, averaging three bridges to every two miles of line.

Eighty miles from Duran and some thirty miles from the point at which the real climb begins is the most spectacular engineering feature of the road. After passing through three short tunnels the line runs plump up against the side of the mountain. Then it backs up the lower leg of a switchback by which it climbs around "Nariz del Diablo" ("Devil's Nose"), an immense rocky promontory jutting out from the mountain. In a little more than half a mile the switchback reverses and goes ahead, still on a grade of 290 feet to the mile, gaining 100 feet elevation before it passes into the Alausi Loop, by which 240 feet additional elevation is gained. Twelve hours are required to climb 144 miles to Riobamba, a town of 40,000 inhabitants at which passengers stop overnight. The journey between Guayaquil and Quito requires two days. As in the old days on the Denver & Rio Grande, no trains are run at night because of the danger involved.

Thirty miles beyond Riobamba the rails reach the summit of the line at Urbina, 11,841 feet above sea level, or 521 feet higher than Frémont Pass, on the C. & S.,

the highest point reached by rail on the continent of North America. Crossing still another range, the line finally reaches Quito, the capital, at an elevation of 8,515 feet.

This second half of the road is flanked by a number of mountains capped by eternal snow, but which are nevertheless volcanoes. From time to time they erupt. The tallest is Chimborazo, highest peak of Ecuador, 21,240 feet above sea level. Cotopaxi, next highest of active volcanoes, looks like a twin of Fujiyama in Japan. These craters often shower vast quantities of ashes down upon the country. In the 400 years since Quito was settled by the Spaniards there have also been 25 earthquakes in which many thousands of lives have been lost.

AND one thing more. Before the railroad was finished, it had to take President Alfaro's part in a "holy war" against him, and it had to win the war, to boot. It all happened because General Garcia Moreno, president of Ecuador from 1861 to 1865 and 1869 to 1875, was a religious zealot who signed away all temporal power in Ecuador to the Church. Fighting against him in no less than a dozen revolutions was General Alfaro, who naturally was against everything Moreno was for.

Moreno was assassinated in 1875. Although Alfaro didn't get a crack at the presidency for twenty years, he made up for lost time when he got in, and he promptly placed all religions on an equal footing and expelled the friars who previously were all-powerful.

These friars went to Colombia, organized a "holy war" against Ecuador, and succeeded in mobilizing a ragamuffin army which invaded their old stamping grounds. Its especial object was to destroy the railroad, which was constructed well up on the plateau by now.

Archer Harman, of course, asked Alfaro to protect it. Thereupon Alfaro, who wasn't so dumb as a lot of dictators, appointed Harman commander-in-chief of the Ecuadorean forces, and told him that he could go as far as he liked in suppressing the invaders!

For a while Harman was up a tree. But when he got one look at the Colombian army which was advancing on the railroad the day of the battle, he knew what his course would be. Lowering his field glasses, he called Engineer Bill Miller to him and said: "Miller, I want you to win this battle."

Miller wasn't sure about that. There probably wasn't a man in the opposition who could hit the side of a barn at thirty feet, but even so, it was a tough assignment for one man.

"You needn't fire a shot," said Harman. "You're a non-combatant, of course. If these Colombians happen to be scared to death by a non-combatant in the pursuit of his duties, that's their hard luck."

Bill was listening intently.

"See!" said Harman. "The Colombians are going to flank the Ecuadoreans. That'll put them on the railroad track. Now, those half-savages have never seen a locomotive. If you run the engine toward them with whistle open, bell ringing, cylinder cocks hissing, and clouds of smoke pouring from the stack—why, the war'll be over."

Bill grinned. "I get you," he said.

He climbed into his cab threw the Johnson bar into the corner, and pulled 'way back on the Consolidation's throttle. His native fireman seized the scoop and began ladling imported coal into the firebox as if expense were no object. Dense clouds of smoke, expelled by the heavy exhaust, shot out of the stack. The hogger opened his cylinder cocks and pumped the whistle lever as he used to do in the good old days before railroads back home had been fenced to scare cattle off the track.

No. 19 bore majestically down on the Colombian warriors, who were huddled on the track amazed and frightened.

Bill opened the blow-off cock for a couple of seconds. The violent jet of scalding water and steam caught a dozen of the Colombians fairly amidships. Screams of

anguish rose above the noise of the locomotive. The entire Colombian army turned and fled.

The local troops, surprised at this coup in their behalf, ceased firing and stood gaping stupidly until their officers, comprehending at last, ordered them to charge in pursuit.

The battle became a rout, the rout became a slaughter. The Colombians left 1,800 of their number dead or wounded on the field. Four thousand were captured.

President Eloy Alfaro received the prisoners on their arrival at Quito, the capital. He gave each a suit of clothes and $10 in cash—which was more money than any of them had ever seen before at one time, and turned them all loose. That ended the "Holy War." The Colombian prisoners took such a fancy to Ecuador that they settled right down there for the rest of their lives. Many went to work on the railroad.

THE first construction train of the Guayaquil & Quito Railway rolled into Quito on June 17, 1908, eleven years after the contract for construction was signed. On June 25 the first regular train arrived, and the golden spike was driven, marking the official completion of the great undertaking.

Quito thereupon began a celebration lasting several days. There were triumphal arches, processions, fireworks and all the features made familiar by similar events in the United States, including a banquet attended by the entire diplomatic and consular corps stationed in the Republic. President Alfaro paid a flowery tribute to Archer Harman who, as a detail in his job, marketed $26,000,000 face value in securities to furnish money to build the road.

In addition to cash expenditure the Guayaquil & Quito exacted a heavy toll in human life. The principal three engineers, Major John A. Harman, W. F. Shunk and Henry Davis, lost their lives on the job. No one ever will know how many workmen were killed, or died of disease.

The Jamaica Negroes, for one thing, brought smallpox germs with them which started a virulent outbreak. Desperate efforts led by the medical corps provided in advance by Harman for just such emergencies soon conquered the epidemic with the aid of vaccine sent by the New York City Health Department on ice; for this was long before refrigeration was fully developed.

The principals in this great undertaking did not long survive. Harman returned to the United States in May, 1911. In the following October he was killed when he was thrown from his horse.

Less than a year after Harman's death Alfaro, fighting his thirteenth revolution, was captured and taken to Quito where a mob, an aftermath of the "Holy War," was permitted to take him from jail and dispose of him according to their pleasures. Although Alfaro died that day, the railroad he did so much for is still going strong. It remains a permanent memorial to him and the hard-working Yankee railroaders who brought to Ecuador the greatest agent of genuine civilization man has ever known: the railroad.

In the Good Old Days

REPORTS of Vermont R.R. Commission for the Civil War period preserve interesting details of railroading in bygone days. The place of a brakeman on passenger trains in motion was "on the platforms of cars ready to apply brakes when the signal is given." On freights one brakeman was to be on the rear car. No cabooses were listed; but a "freight saloon" is mentioned, which may have been the ancestor of the caboose. A few roads had "drovers' saloons," for drovers taking their cattle to market. Rates of pay were not high. Conductors got $60 a month, brakemen $30, laborers $30, firemen $30, engine drivers $40 to $60, and station men $100 to $600 a year. Average weight of passenger cars was 24,000 pounds; baggage cars, 17,500 pounds; box cars, 14,000, and platform cars, 12,770 pounds.—Wm. H. Wanzer, Burlington, Vt.

Sentimental Value

By DON LIVINGSTON
M-K-T Op and Agent, Vinita, Okla.
Author of "Taxpayers' Money"

"My Railroad Never Buys Business," Boasts Sol McCool. "Not Even $200,000 Lumber Business"

THE strongest weakness of a railroad is its customers. The customers are human, the railroad is mechanical; sooner or later these elements get tangled up. Then they send for Solomon McCool. That's me. I'm traveling freight solicitor on the Oil Belt & Western Railroad. My job is to pacify customers and sell freight service.

Last Monday while I'm down at Shidler attending a meeting of the Grand River Hydraulic Dam Booster Association, the general freight agent calls me on the phone. I know by his tone that the burdens of traffic solicitation are to be doubled upon the shoulders of yours truly.

"We're in a dickens of a mess, McCool," says the general freight agent. "You're acquainted with the Terry Lumber Mills over at White Oak, I believe."

"I am," I tell him. "And that's the least of my worries. Old Man Terry was strong for the O.B.&W. Since he died we continue to get his lumber business, which amounts to about two hundred thousand a year."

"No more it don't," snorts the G.F.A. "We've lost that business!"

That news is a surprise.

"Don't tell me, Mr. Pullen, that the Amalgamated Waterways Association has subsidized the Government into opening up Cabin Creek for steamboat transportation and got that business away from us!"

"It's a fight, McCool. You know the lady who inherited the mills when Old Man Terry died?"

I nod over the phone. "Yep," I says, "the old man's daughter. They say she knows more about lumber than you and I both know about railroading."

"Did you know she had a driving horse?"

Again I nod. "I know the old man had one. I rode behind that nag one day when the old man insisted on driving me around all the mills. But say, what's the connection, Mr. Pullen?"

"The connection," says he, "was between the horse and the engine on our local freight. They met on a crossing. Miss Terry filed claim for ten thousand dollars for the horse."

The nag, as I recall it, had two feet in the grave and the other two marking time.

"I can repeat the rest of the story backward," says I. "The claim department offered her seventy-five bucks."

"No, they offered an even hundred. Miss Terry retaliated by instructing her traffic department to route every splinter of her lumber over the Inland Short Line. Our general manager, Mr. Sprague, is tearing his hair. He swears it's positively up to us to get that business back."

When Mr. Pullen says "us" he means of course the Traffic Department. Nevertheless, I says to him: "Tell the Claim Department to get this right. It's their fight, not ours."

"McCool," raves the G.F.A. savagely, "do you have even a hazy idea what that horse was actually worth?"

Privately I think that if anybody had asked fifty bucks for that nag they'd be guilty of highway robbery. But I says:

"Mr. Pullen, I always have ideas; and there's nothing hazy about this one. That horse is worth exactly two hundred thousand dollars a year to us."

"Be sensible, McCool."

"Well," says I, "if that nag is to cost us two hundred thousand annual loss in revenue, we'd better please the old maid's vanity to the tune of ten thousand."

"The Oil Belt & Western never buys business," replies the G.F.A. loftily, and I gather that he's quoting the general manager. "No use arguing, McCool. That's your job. Go get that Terry order back. The Lord knows how. But go get it."

THE next morning finds my feet parked on the desk of Al Masters, who is traffic manager for the Terry Mills in White Oak.

Not long ago Al was designated as "Revising Desk No. 8" in the accounting department of the O.B.&W. Railroad, before he got the job with more pay routing "toothpicks" for Old Man Terry. Al can find more rates and exceptions reading a tariff upside down than the whole I.C.C. can find reading it right side up. He is a friend of Sol McCool's.

"Sol," he says sadly, "this is one time I can't help you. Miss Terry instructed me to route every pound of freight against you. It runs in the

Terry family to see that instructions are followed."

"Al," I tell him. "It's up to me to get the princess of the mills to change them orders. What I want of you is a suggestion how to go about it."

"Sol," he declares, "there is only one way of getting that business back. Pay Miss Terry what she asks for the horse. She'll give you a routing order in exchange for the check."

"The Oil Belt & Western never buys business," I tell him haughtily. "You should know that."

Al follows me to the door. He's a good scout and I can see that he's sorry for me. He offers a little advice:

"Get all the information you can before going to see Miss Terry—not that it would help you get the business, but it may help you feel the stab of defeat less sharply."

"Yeah," I says. "Go on."

He goes on: "Miss Terry is an old maid. She's spent all her life growing up in the lumber business. Socially the Terry family stayed where it was when her mother died thirty years ago. There's no electricity in that twenty-room shack of hers. No telephone. None of them modernistic things. The help still carries water from the spring down below the house. That attitude explains her horse and buggy. She keeps a bulldog chained to the front porch to discourage auto salesmen. I'm wishing you more luck than I can hope for, Sol."

A LITTLE later I'm leaning against the iron dog hitching post gazing over the picket fence at the Terry homestead. It's a red brick house with green shutters and big white porch pillars and ivy clinging to the walls. Miss Terry has her private office in the house, where she handles the executive end of her business.

I decide on a rear attack of the fortress, because on the front porch I can see plenty of the bulldog which Al mentioned, but can see nothing of the chain. However, near the back gate a colored boy dusting a buggy in a shed assures me that the dog is actually chained.

I retrace my steps around to the front, as becomes a representative of the foremost railroad in White Oak County. An antiquated Negress shows me through a large double door leading off from the hall.

The window draperies are heavier than a Pullman carpet. A huge chandelier with a million spangles hangs from the ceiling. There's dignified oak furniture, and a parrot on a rack, and a big Maltese cat asleep in the chair that I ain't invited to occupy.

Miss Amanda Terry is seated at a desk the size of two billiard tables, in front of the double window overlooking the lawn. She has the bearing of a Congresswoman, and strong, regular features which twenty years ago must have created agitation in young masculine bosoms.

Even now she ain't at all bad looking. She's wearing a white shirt waist and a long black skirt like women used to wear when I was a kid, but which now look slightly screwy.

"Not bad at all," I says to myself. "Now, if I weren't married . . . what with her money, and so forth . . . especially the money . . ."

AMANDA glances at my business card. Then she measures, catalogs and indexes me with a ten-second gaze of her steady gray eyes.

"I suppose you have come to settle my claim, Mr. McCool," she states in

a tone of supreme confidence and unalterable decision.

"Miss Terry," is my reply, "I represent the Traffic Department of the O.B.&W. Railroad. I have no authority in the matter of claims, which are handled by the Claim Department; but I am sure that a fair and agreeable adjustment of your claim will be made. My purpose in calling, Miss Terry, is to discuss the routing of your lumber shipments."

Amanda Terry elevates quizzical eyebrows. "That is very inconsistent, Mr. McCool," she says. "I personally wrote your general manager, Mr. Sprague, and informed him that your road will handle no more of my business until my claim is paid. I consider it extremely impertinent for you to ask me to change that decision."

"I believe that the Claim Department considers the amount of your claim exorbitant, and that—"

"So I understand," interrupts Miss Terry sharply. "It seems peculiar that your railroad assumes to fix the value of an animal on a commercial basis, when old Silas had no commercial value."

I am inclined to agree with this statement, but discreetly say nothing. Miss Terry amplifies:

"My claim is based strictly upon a sentimental value. My father raised that horse from a colt and drove him for twenty-three years. I would not have sold him for five times the amount I am asking. Silas served faithfully, and he will not be forgotten. With the ten thousand dollars I shall provide a home for old and neglected horses as a memorial to him. Good morning, Mr. McCool."

"But, my dear madam—"

"Good morning, Mr. McCool."

"But—"

"Just a minute!"

Amanda Terry snaps those last words. I see that I made a mistake, and it's not the first one I made since I came there, either. Miss Terry raised her voice and calls:

"Tilly, bring in Grover!"

Grover is the name of the bulldog, as I discern when the Negress came leading him in. He sniffs hungrily at my leg, and I move toward the door.

Miss Terry pierces me with an angry flash of the eye, but her voice has lost none of its quiet decisiveness.

"Mr. McCool, it is seldom that a caller is so rude as to force me to this extreme. And now, good day, sir!"

I HUSTLE back to the depot and sit on a keg of nails in the shade of the eaves on the platform and whittle curlicues out of a soft pine board while I apply my mental tabulators to the task of devising ways and means.

My job is to get that business back to our line; and never yet—while there was still a trick of diplomacy, statecraft, mesmerism, or legerdemain left up his sleeve—has Sol McCool ever reported back to his boss that it can't be done.

It is a warm and lazy day in July. Except for the clucking of an old hen with a brood of chickens under the platform, and the intermittent click of the telegraph instrument in the agent's office, the whole town seems to be asleep.

After creating a right smart pile of shavings, I hit upon a scheme that seems to hold promise of success.

After a badly delayed lunch, I return to the Terry castle. This time I approach by the drive that leads to the back. There I find what I'm looking for, sound asleep under the buggy which he is supposed to be polishing.

I kick the soles of his feet. He is so delighted to find that it is a stranger and not Miss Terry who has caught him asleep on the job, that he'd gladly give me the routing order I want, except for the fact that he doesn't have it.

I slip him a half dollar. Immediately I become a fast friend of Sam Hooker, general factotum and footman of the Terry household, and past grand caretaker of the late lamented Silas.

I explain to Sam that I want to find a horse to replace Silas, one as nearly like the original in appearance and temperament as possible, and that our scheme must be kept absolutely secret.

"Mistuh," declares Sam, "dat Silas been de laziest, stubbo'nest, no-'countest hoss ebber drawed breff. He nebber trot faster'n a walk, and he balk ebber' time he cross de railroad track. But ole Marse Terry and de Missee dey think dey's no hoss like ole Si."

"That explains a lot," says I.

Sam seems to know all about horses, especially the dead one. He knows of another nag a few miles from town that looks as much like old Silas as one pea looks like itself. Tomorrow, after Miss Terry starts on her daily round of mill inspection at eleven o'clock, he can take me to see that steed.

So the next morning finds me and Sam in a rented car hurrying countryward to look the animal over.

On the face of it, the scheme looks foolish. But I've learned that extreme cases must be met with extreme remedies. Fight fire with fire; meet Greek with Greek; such are the theories and practices which are responsible for whatever meager degree of success yours truly may have had in the little game of seducing tonnage into the traffic flow of the O.B.&W.

HERE am I, charged with the responsibility of overcoming an obstacle built of sentiment and fortified with a bulldog.

Could I hope to show Amanda Terry the error of her way? Never! Sentiment is blind and is not on speaking terms with logic. Besides, it isn't recognized by the Claim Department of the O.B.&W.

Now don't misunderstand my rating of the lady. She's not a fluttery kind of female, even if she does go strong on sentiment. She's got one of the shrewdest business heads that ever weathered a depression, and she knows more about the lumber business than Huey Long knows about politics.

Even sentiment must have some reason for hurling ultimatums at the O.B.&W., and my theory is this:

Amanda is giving herself the fling she should have had twenty years ago. She's giving expression to that feminine urge to conquer, to have and to hold, and to do the things that common sense says can't be done.

All her life she's been too efficient, too thorough, too machine-like. She's been denied the self-expression which is the heaven-sent right of every woman. She's never had a lover break a corset-stave or whisper nonsense in her ear.

She's never sung in the village choir, nor gasped over the latest gossip at the bridge club, nor burnt the toast, nor spanked a baby, nor none of them things which the Creator fixed as the inalienable right of women.

Amanda is emotionally starved and don't know it. The death of old Silas set up in her an emotional wave. Instead of subjugating it with a firm hand, as she has done in the past, she lets it have sway; and it sweeps her off her feet.

And yet the Claim Department of the O.B.&W. doesn't recognize the existence of sentiment!

But me, Sol McCool, I recognize such things. And so I am negotiating with Abner Wilkins, farmer, for the sale of a pot-bellied bay horse with a skimpy mane, a head like a hammer, and a tail full of cocklebur—which Sam says is the living image of the lamented Silas.

I OBSERVE on arriving at the Wilkins farm that there is a gathering of a dozen assorted swains in the barn lot, but at the time I think nothing of it.

Mr. Wilkins himself, a red-faced, chubby man of fifty with transparent eyes and sandy hair, says I might have my pick of the eight or ten horses in the lot.

"How much for that bay?" I ask, pointing to the one which Sam indicated.

"Four hundred dollars in cash."

"Apparently my question was improperly worded," says I. "How little cash will buy him?"

"Four hundred," repeats Wilkins.

"Do I look green?" I ask.

"Take it or leave it," says Mr. Wilkins. "I reckon you railroad fellers ain't the only slick ones in these parts."

I perceive that Abner Wilkins has learned of my requirements and has fixed the price on me. Later I learn by close questioning that Sam divulged the plan in strict confidence to a friend of his down at the barber shop, and that explains it. It also explains this gathering of spectators who have come to see Neighbor Wilkins make a sucker out of a railroader.

While I'm cogitating these things, Mr. Wilkins shakes a defiant finger under my nose, and says:

"See here, feller, you want that horse and you're a-goin' to pay my price, because I know what you want him for. You aim to give him to Miss Terry in place of that old plug your train killed, jest because she's rich and don't need it. If she was one of us pore farmers got a horse killed you'd offer us a third of what it's worth and tell us to kiss your foot for the rest."

Now Sol McCool's account ain't elastic enough to cover any $400 horses. Also by nature and inclination. I'm opposed to being robbed by any process less gentlemanly than a six-shooter in a dark street.

So I look the situation in the face, also that gang of grinning rustics. Because I can't afford to lose my temper and say the things I'm thinking, I turn my words to the higher themes of benevolence and sympathy.

Miss Terry, I tell 'em, despite her millions, is poor in comfort and happiness, poor to the extent of grieving for an old and valueless horse. It is a loss which can't be replaced with money; a loss to the heart instead of the purse.

"So you see, gentlemen," I conclude, "we are all—farmers, railroaders, lumber millionairesses—we are all of one clay and one family, of common griefs and common joys. We bruise our brother in the wild scramble for dollars, but we place tear-stained flowers upon his grave and succor his widow and orphans. Should we, then, be surprised that a great and busy railroad should pause and consider and be found buying a lowly horse to bring joy into a lonely orphan's heart?"

There isn't a dry eye in the crowd when I get through—and our Claim Department scoffs at the value of sentiment. Mr. Wilkins, with tears streaming down his face, grips my hand.

"McCool," he declares, "that horse ain't worth more'n thirty dollars of any man's money; and this bein' a humane mission, I want to share it with you. You can have him for twenty-seven fifty."

SAM and I spend three days rubbing down and trimming up the horse and teaching him the habits and mannerisms of the departed Silas. Sam shows me how to drive him over the route that Miss Terry takes daily, and stop him for a snooze at each point of inspection.

Getting him familiar with the jog and the route is easy enough; but training him to duplicate old Silas' trick of pretending to be afraid to cross the railroad track is a task for a horse-trainer.

Behold the trainer! Persistence wins. During these three days I drive that brute forty-three times over that crossing, each time pulling him to a stop just short of the crossing. Then I yell "Giddap!" but hold him in check with the lines.

At length he gets the idea and finds it agreeable with his own idea of industry. After that he stops at the crossing of his own will and can be put again into motion only with a lot of clucking and line-slapping.

Huh? Where do I get the buggy and harness? Oh, I rent them from a Baptist preacher who keeps 'em to drive out to his rural church and only uses 'em on Sunday.

By and by I give the horse his verbal sheepskin by calling him Silas, and I inform Sam that we're ready for the presentation.

Now Miss Terry, since the death of her $10,000 Silas, has a farmer boy call for her at eleven each day for a trip of inspection of the mills. I cross the palm of this rural coachman with the necessary incentive and he agrees to play absentee the next day.

So the next morning there awaits a complete new set of transportation equipage. It consists of the Terry buggy, to which is attached the living replica of the late lamented Silas. He's all dressed up in the Terry harness. Dozing there at the iron dog hitching post, full of oats and contentment, he fits into the picture like a pecan fits its shell.

Me, I'm there, too. I turned the hands of time back three decades and I'm dressed up for the occasion. High-top button shoes, black round-tail coat with two buttons and a double flap in the back, striped trousers, and one of them little turtle-shell derby hats that had survived the Bryan campaigns. These I borrowed from an antiquated deacon of the church who keeps them for old settler reunions.

I stand beside the buggy, hat in hand, like a gay lad of the '90's posing for a tintype.

MISS TERRY has almost reached the gate before she notices what has happened. Then she stops in her tracks with a startled little *"Oh!"*

Her eyes get big and she grabs her throat with one black-gloved hand. For a moment I think she's going to faint from the shock of seeing old Silas again in the flesh. But when she gets a closer look at him, I see the tides of life again start to flow and the fire shoot into her eyes, and I know that all is well.

Amanda now believes she's looking at a caricature of the things she holds most sacred—a cruel and sacrilegious jest at her expense.

Right there I play my part, and I do it quick, before that Terry temper

has time to get in its work and call the bulldog. I make a bow that would do credit to a maharajah. Sure, I been practicing that bow in my hotel room for the past three evenings, also the little speech that goes with it. It is a $200,000 speech.

"Miss Terry," says I, "the Oil Belt & Western Railroad realizes that you have suffered a loss which money cannot replace. Therefore we have made a conscientious effort to replace, to the best of our poor ability, the faithful animal himself.

"While we know that no human power can restore to you the worthy creature to which you had become so deeply attached, yet we believe that this animal, too, may serve you loyally, and in some small measure take the place of the beloved Silas.

"On behalf of the Oil Belt & Western Railroad, I present you this animal, Miss Terry, and request for myself the honor of accompanying you on your first drive with him."

As I finish I see moisture in the eyes of Miss Terry. She suddenly sniffs in her kerchief and looks at me and at the horse, and her lips are trembling a little.

Then, without a word, she steps forward and extends her arm for me to assist her into the buggy. I take a deep breath of relief clear down to the belt line of them antediluvian pants, and crawl in after her.

AMANDA does the driving. We proceed in silence as far as speech is concerned. The new Silas jogs along at a lazy trot, making every turn in the road without any help from the driver. Hope begins to swell up in the bosom of yours truly, Solomon McCool, also visions of a $200,000 routing order.

We approach the railroad crossing. True to his training, Silas comes to a dead stop with his fore feet just short of the first rail. Miss Terry gives a little gasp of astonishment and turns to me with a question in both eyes.

"You see, Miss Terry," I explain, "even in the little eccentricities this animal is like your Silas."

"He is," she says fervently.

Suddenly I hear the familiar blast of an O.B.&W. locomotive whistle and see the smoke shooting up in a cut a few hundred yards away.

Miss Terry also sees it. She slaps Si with the lines and says "Giddap!" But Si don't move; he remembers his training.

The lady slaps him harder. In fact, much harder than he is used to, and it arouses his resentment. Instead of moving ahead like a sensible beast, he starts to prance and toss his head just to show his annoyance.

Meanwhile, the roar of the approaching engine gets louder and the line-slapping and the "Giddaping!" more emphatic. It being contrary to Terry ethics to carry a buggy whip, there's nothing I can use on the brute except some unflattering remarks, which I hope Miss Terry in her excitement don't hear.

Si won't budge. Mebbe he thinks he's been double-crossed, and says it don't make horse sense to be taught to stop at that crossing and then lashed with the lines for doing it. It looks like the human family ain't the only race that's temperamental.

In three jiffies that engine is right on us. I grab Amanda around the waist and jump. The next instant old Silas takes notice of the approaching danger and makes a dash to clear the track. He gets clear, but the buggy don't. There's a violent crash, and then it

starts to raining spokes and shafts and buggy hardware.

Carrying the lumber magnate under my arm, I try to dodge the fusillade, but it seems like the ground disappears under my feet. Next thing I know, I'm sprawled in the cut at the side of the road with Amanda in my lap and a buggy tire around my neck.

The train has only half a dozen cars, and it stops with the caboose just clear of the crossing. The conductor untangles us from the wreckage and lifts us out of the ditch. Except for a pallid face and a little unsteadiness on her feet, Amanda seems to be intact. She don't go into hysterics like most women would, because she ain't that kind.

Howsomever, there's a peculiar fire in her eyes as she silently looks over that scene of wreckage and destruction. A motorist stops to investigate and offers to take Miss Terry home. She climbs grimly into the car and is whizzed away—her first auto ride!

Silas is eating grass fifty yards up the road. The buggy wouldn't make respectable stove kindling. I sit on the remnants of the buggy cushion and do a little mental arithmetic. If a $30 horse is worth $10,000, how much is a $150 buggy worth?

I TAKE old Si back to the livery stable. The station agent comes looking for me. Miss Terry has sent word for me to come immediately to the house. I know what that means. My goose was cooked.

Of course, it's really a job for the claim agent; but that means nothing to Amanda. I'm a representative of the railroad, and she'll expect me to handle her claim for the mutilated buggy. And what a claim it'll be! Not a cent under $20,000 is my guess. I don't do any handsprings on the way to the house.

The magnate of the toothpicks industry is seated at her desk, showing no visible effects of the recent accident. She looks at me calmly, and I deduce that the Terry mind has decided what the penalty is to be. Then I find myself doubting whether my $20,000 figure is high enough.

"Mr. McCool," she says in business-like tones, "here is an envelope containing a paper of importance to your company. I am placing it in your hands to be delivered to the proper official."

She rises and steps around the end of the desk to hand me the unsealed, unaddressed envelope. I accept it with a sinking feeling in the pit of my stomach, for I take my business seriously, and it's the first time I've ever cost the company a big sum of money.

"Well, good morning, ma'am," I says in a mournful way. "Sorry to—"

But Amanda Terry has something more to say.

"Furthermore, Mr. McCool," she adds with something of the crispness gone from her voice, "there is a matter of personal significance which I must mention. I am deeply indebted to you. I owe you my life. You courageously rescued me from the very jaws of death and I am truly grateful. You see, Mr. McCool, I—I never was rescued by a gentleman before."

Huh? What is in the envelope? Say, I haven't yet recovered from the shock. It's a routing order giving every car of Terry lumber to the O.B.&W.! The general freight agent is still asking how I got it.

Sometimes I wonder whether or not I did the right thing in getting married before I met the wealthy Miss Amanda Terry.

The "John Bull," First Locomotive Built with a Cowcatcher

November in Rail History

IF you want to know what happened on your birthday or any other day of the year, consult this almanac, which began last April and will end next March. We thank all readers who sent us dates.

November 1

1837—Georgia R. R. & Banking Co. opened, 232 miles.

1840—South Carolina Canal & R. R. opened from Charleston to Columbia. (Was world's longest continuous railroad and first road to carry U. S. mail. Now part of Southern System. See article by Earle Davis, Oct., '33, issue.)

1843—Rutland R. R. chartered as Champlain & Connecticut River R. R., 178 miles. (Opened Dec., 1849. Name changed to R. & Burlington, Nov. 6, 1847, and to Rutland in 1853. Total mileage today, 415.)

1855—Bridge over Gasconade River gives way under excursion train of Pacific Ry. of Missouri (now Mo. P. and Frisco Line) at celebration in honor of road's opening. Train falls 30 ft., killing 22 persons, including road's chief engineer, and injuring over 50.

1869—Brooks Loco. Works, Dunkirk, N. Y., begins operation. (Now Dunkirk plant of "Alco.")

1892—Last day for trains without automatic couplers in N. Y. State.

1895—Central R. R. & Canal Co. of Georgia reorganized as Central of Ga. Ry. (Total mileage today, 1,926.63.)

1901—Rutland R. R. secures entrance into Montreal, Canada, via the C. P. Ry. and the Que., Mont. & Sou. Ry. (now part of C. N. R.).

1919—Opening of C. N. R. station at Vancouver, B. C.

1922—Abandonment of Germany's first railroad, the Nurnberg-Furth.

1926—C. N. R. oil-electric car No. 15820 runs 2,937 miles, Montreal to Vancouver, in 67 hrs. actual running time, Nov. 1-3.

1934—H. S. Palmer, vice pres., becomes president of 2,071.84-mile N. Y., N. H. & H.

November 2

1886—Sou. Kansas Ry. of Texas inc. (Name changed in June, 1914, to Panhandle & Santa Fe Ry. Now operates 1,879 miles in Texas and Okla. in Santa Fe System.)

1909—Mexican Govt. grants concession for construction of Mexico Northwestern Ry. (475 miles).

1925—Khyber Pass Ry. of India opened. (See article by Chas. Carter, June, '34.)

November 3

1859—Construction work begins on Hannibal & St. Joseph Line (now part of Burlington). Project was started in Hannibal, Mo., law office of John M. Clemens, father of "Mark Twain," famous author. (World's first railway mail car later ran over this road.)

November 4

1864—Pres. Lincoln approves first 100 miles W. from Omaha as permanent location of U. P. Ry. (See article by Edwin C. Hill, Aug., '30.)

1883—Wm. P. Hepburn, Congressman who sponsored bill giving I. C. C. authority to fix railroad rates, born at Wellsville, O. (His bill became law June 29, 1906.)

1903—Uintah Ry. inc. in Colorado. (Known as "world's crookedest railway" completed Feb. 1, 1905; between Mack, Colo., and Watson, Utah, 68½ miles, 3-ft. gage. Recently abandoned. Details in Jan., '33, issue.)

November 5

1842—First (B. & O.) train reaches Cumberland, Md., 178 miles, from Baltimore. (First B. & O. steel-rolling mill later built there.)

1871—John M. Davis, president of D. L. & W. R. R., born in Texas.

November 6

1836—First steam engine in Maine makes initial run on Bangor, Oldtown & Milford R. R. (now part of Maine Central). Built in 1835 by Robt. Stephenson in England. Weight, 6 tons. Only one pair of drivers and one pair of ponies. No pilot, cab, headlight, or reversing mechanism. (Her last trip was made Aug. 19, 1867.)

November 7

1854—First train reaches Peoria, Ill., from Chicago on Bureau & Peoria R. R. (which on Feb. 1, 1855, became part of the Chicago & Rock Is. R.R.).

1885—Last spike of C. P. Ry. main line driven at Craigellachie, B. C., in Rocky Mts. (See article by Chas. Carter, Aug., '35.)

1890—Death of Wm. D. Robinson, founder of Brotherhood of Locomotive Engineers and its first Grand Chief Engineer. He was born May 22, 1826.

November 8

1885—First Canadian transcontinental train from Montreal reaches Port Moody, B. C.

November 9

1840—Eastern R. R. in Mass. opened to New Hampshire line, 41 miles. (Later 282 miles long; now part of B. & M. John A. Thompson, author of the Engine Picture Kid stories, wrote a historical novelette based on this road, "Iron Horses," July, '32.)

1869—Chas. Donnelly, president of 6,682-mile Northern Pac. Ry., born at Wisconsin Rapids, Wis.

1885—Santa Fe Ry. reaches San Bernardino, Calif.

1933—Ground broken at Atlantic City, N. J., for P. R. R.-Reading Seashore Lines station.

November 10

1840—Locomotive "Philadelphia," made in America, bursts her boiler while climbing the Lickey Incline from Bromsgrove to Blackwell, England, on Birmingham & Gloucester Ry.; engine crew killed. (See article by John Thomas, July, '35.)

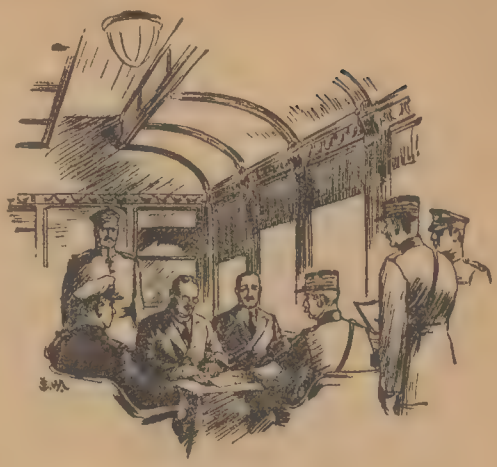
1873—Opening of Black Forest Railroad in Germany. (This road served as a model for the famous St. Gotthard Railroad in Switzerland.)

1884—"New Haven Limited," known as ghost train because of its whiteness, inaugurated on N. Y., N. H. & H. (Discontinued Oct. 18, 1895.)

1898—N. Y. & Hoboken Ferry Co. inc. in N. J.; wharf and dock properties leased to D. L. & W. R. R., valuable because they give entry into N. Y. City.

1909—Ecuador Govt. in South America grants concession for construction of Central Ry. of Ecuador. (This road preceded the Guayaquil & Quito. See article by Chas. Carter, this issue.)

1931—Arthur Curtiss James, America's largest holder of railroad securities, drives golden spike at Bieber, Calif., marking entry of Great Northern System into San Francisco territory.



War Lords Signing the Armistice

November 11

1918—World War armistice signed in Wagon-Lits Co. dining-car on railroad track in Compiegne Forest. Car used as private quarters for Marshal Foch, commander-in-chief of Allied armies. "Wagon-Lits" is name of International Sleeping Car Co. of Europe.

November 12

1831—"John Bull," first locomotive with cow-catcher, put into service on Camden & Amboy R. R. (now part of P. R. R.) at Bordentown, N. J., with Isaac Dripps at throttle. Was built at Stephenson works in England. First engine to run on C. & A.

1904—Dr. Chas. F. Dowd, school teacher of Saratoga Springs, N. Y., who worked out the standard time system now in use and then worked for 12 years to get it adopted by the railroads, is killed by railroad train at grade crossing. This system divides U. S. into 4 time zones; it went into effect Nov. 18, 1883. (See article by Chas. Corwin, July, '35.)

November 13

1849—Manchester & Lawrence R. R. opened from Manchester, N. H., to Lawrence, Mass., 26 miles. Was chartered June 30, 1847. (Now part of B. & M.)

November 14

1895—Erie R. R. inc. as successor by reorganization of N. Y., Lake Erie & Western, absorbing the Buffalo & S. W. R. R., the Lockport & Buffalo Ry. and the Erie International Ry.

November 15

1888—Aspen Short Line Ry. inc. in Colorado. (On Nov. 23, 1893, it became Aspen branch of

Colo. Midland Ry.; Basalt to Aspen, Colo., 18.4 miles. Now abandoned.)

1926—Toledo, Peoria & Western Ry., sold at auction, is reincorporated as T. P. & W. R. R. (One of America's worst wrecks occurred on this road at Chatsworth, Ill., in 1887. See article by N. A. Critchett, June, '35.)

November 16

1889—First regularly scheduled passenger train runs on Oahu Ry. in Hawaii (172 miles, 3-ft. gage), leaving Honolulu on King Kalakana's birthday. (See article by Willis Austin, May, '35.)

1896—First use of Niagara Falls power to run electric street cars in Buffalo. Power transmitted 26 miles.

The "Sandusky," First American Locomotive with a Steam Whistle

November 17

1837—First locomotive built by Thos. Rogers, the "Sandusky," shipped by water, arrives at Sandusky, O., for broad-gage Mad River & Lake Erie R. R. (Ohio's first railroad) although no track is laid yet. (Now part of Big 4 System.) She is first American locomotive with a steam whistle. Cylinders, 11 x 16 inches.

1870—Painesville & Youngstown R. R. inc. in Ohio, second narrow-gage railroad company organized in U. S. (Extended 64½ miles. Now part of B. & O.)

1907—Union Terminal at Washington, D. C., is completed and opened.

1924—Wreckage of eastbound freight train on C. I. & W. out of Hamilton, O., is strewn along 3 miles. (Was this America's longest wreck?)

November 18

1876—Jersey Central passenger train, not equipped with air brake, reaching Jersey City ferry house, plows through station and freight offices, and plunges into river.

1885—First through train from East arrives at San Diego, Calif., on Calif. Southern R. R. (now part of Santa Fe System).

1934—Last run of steam-drawn train on Freeport, Ill., branch of C. & N. W. Electric cars inaugurated after 70 yrs. of steam service.

November 19

1927—Work completed on one of world's largest railroad fills, on Catawissa branch of the Reading near Ringtown, Pa. Fill is 3,340 ft. long, maximum height is 116 ft., maximum width at base, 368 ft. Contains 1,352,613 cu. yds. of material; cost $1,200,000; took 5½ yrs. to build, replacing steel viaduct which replaced timber trestle.

November 20

1827—B. & O. starts surveys to find best route between Baltimore, Md., and Ohio River—the termini for which road is named.

1855—First railroad train in Iowa is excursion on the Mississippi & Missouri R. R. from Davenport of Muscatine, arriving in heavy rain at 12 noon; 6 overcrowded coaches pulled by 2 locomotives, the "Muscatine" and the "Davenport."

1879—First train runs from Farmington to Phillips, Me., on Sandy River Line, America's longest 2-ft.-gage railroad. (See articles by Linwood Moody, Aug., '35, and Freeman H. Hubbard, Nov., '31.)

1898—B. & O. inaugurates its "Royal Blue Line" passenger trains.

November 21

1845—Opening of first railroad on island of Jamaica, West Indies.

1862—B. & M. passenger train runs into open drawbridge almost at entrance to station, Boston, Mass.; 6 killed, many injured.

1934—"Flying Scotsman," L. N. E. R. train in Great Britain, hauling 6 cars, touches 97½ m.p.h. on record-breaking, non-stop run between Leeds and London. Covers 186 miles in 152 mins.; average, 73.8 m.p.h. Covers 155 miles at average of 80 m.p.h. Round trip, 372 miles said to be fastest ever made on British rails.

November 22

1854—Illinois Central opened between Cairo and Sandoval, 119 miles.

1882—Belt Ry. of Chicago inc. (Now operates total 400 miles of track.)

1915—First through train on Canadian Northern Ry. leaves Vancouver, B. C., from old Great Northern station.

1915—Most disastrous wreck on Central of Ga. Ry.; collision between circus special and passenger train; 11 killed, 42 injured, near Columbus, Ga.

1927—Milwaukee Road, in bankruptcy, sold at auction in front of station at Butte, Mont., for $140,000,000 to Kuhn, Loeb & Co. and Nat'l City Bank of N. Y.

"Old Ironsides"

November 23

1832—Matthias Baldwin's first locomotive, "Old Ironsides," successfully demonstrated on Phila., Germantown & Norristown R. R. (Now part of the Reading. Photo in Dec., '30, issue.)

1883—Colorado Midland Ry. chartered.

1888—First lodge of Carmen's Mutual Aid Ass'n instituted at Minneapolis. (It later amalgamated with Brotherhood of Ry. Car Repairers of North America and became Bro. of Ry. Carmen of America.)

November 24

1884—Schuylkill Valley R.R. enters Reading, Pa.

1892—Manila-Dagupan Ry. in Philippine Islands completed and opened. (Details in June, '32, issue.)

1905—Canadian Northern R. R. enters Edmonton, Alta.

1908—"20th Century Limited" running time, N. Y.-Chi., lengthened from 18 to 20 hrs. (Later shortened to 17. Details in Dec., '34, issue.)

1912—"Pennsylvania Special" train is renamed the "Broadway Limited."

1916—Central European Sleeping and Dining Car Co. founded in Germany.

November 25

1908—Norwood & St. Lawrence R. R. in N. Y. State acquires the Raymondville & Waddington R.R. (Now operating only 18 miles.)

November 26

1869—Consolidation of E. Tennessee & Va. R. R. with E. T. & Ga. R. R., forming E. T., V. & G. R. R., 269 miles, 5-ft gage (Now part of Southern System.)

1886—Dozen section foremen meet at LaPorte City, Ia., with A. D. Thurston, day op at that point, forming first lodge of International Brotherhood of Maintenance of Way Employees. (In June, 1886, Thurston formed a group which later developed into Order of Ry. Telegraphers.)

November 27

1849—Androscoggin & Kennebec R. R. opened. (On Oct. 28, 1862, it merged with Penobscot & Kennebec, forming Maine Central R. R.)

1850—First meeting of board of directors of Rock Island & La Salle R. R. (father of Rock Island System), held at Rock Island, Ill., petitions Congress for right-of-way and asks Ill. legislature for permission to build through Chicago and for change of title to Chicago & R. I. R. R. (all of which were granted early in 1851).

1909—King of Norway opens 291-mile railroad between Christiania (now Oslo) and Bergen, Atlantic seaport.

November 28

1871—Southern Central R. R. opened, 116 miles from Fair Haven, N. Y., to Penna. state line. (Now part of Lehigh Valley System.)

1885—First train from Capetown enters Kimberly, center of South African diamond district.

1886—Frank M. America, editor of "Erie Railroad Magazine," born at Buffalo, N. Y.

November 29

1875—Entire line of N. Y. & Canada R. R., 138½ miles, opened. (Now part of Delaware & Hudson System.)

1893—Canadian Pacific Ry. acquires by lease the line from Dunmore to Lethbridge, Alta., 109 miles, from Alberta Ry. & Coal Co.

November 30

1846—Death of Friedrich List in Kufstein, Austria. He was the father of German railroading. (See feature article by E. J. Baker, coming next month.)

1932—Knox R. R. makes its last run as common carrier. Union to Warren, Me., 8 miles. Originally known as Georges Valley R. R. Bought in 1908 by Great Northern Paper Co., which changed road's name to Knox.

Corrections and Comments

CORRECTION in almanac, Sept. 11, 1911: The Buffalo & Susquehanna is now part of B.&.O., not D.&H.—P. E., Salem, Ill.

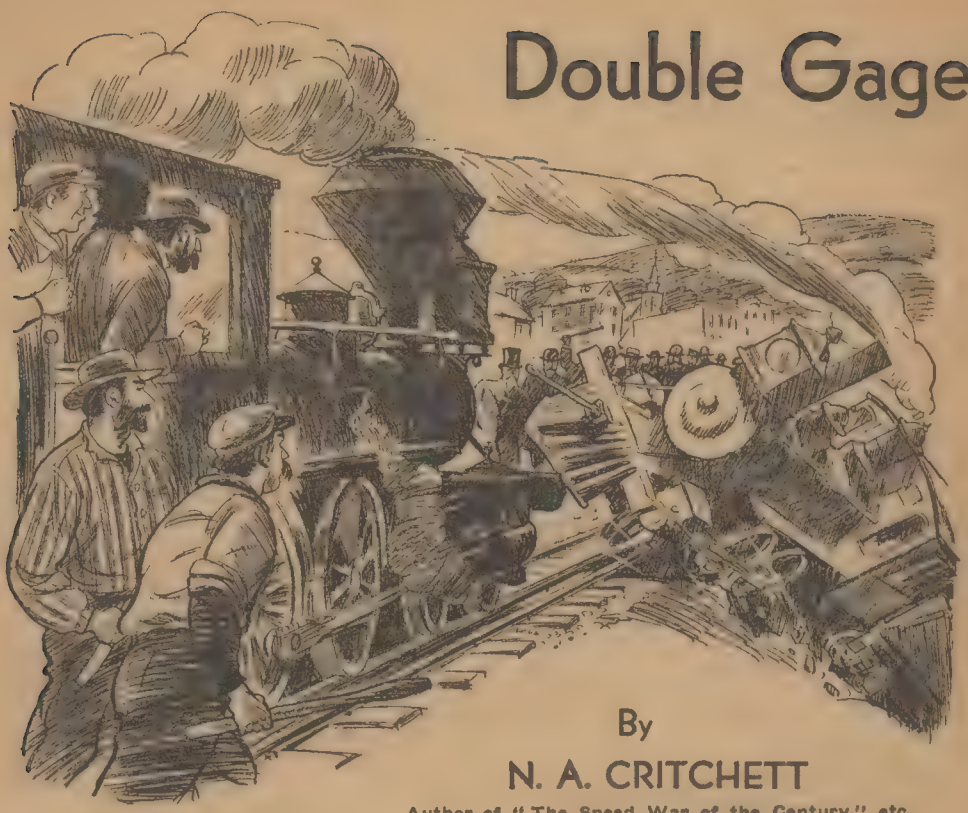
* * *

SEPT. almanac said St. Louis Union Station was the only railroad depot in America containing a moving-picture theater. South Station, Boston, Mass., also contains one.—Wm. Rigney, 1321 D St., N. E., Washington, D. C.

* * *

REGARDING the silhouette of the brakeman (Sept. issue, page 62): That's not the way a brake is set—unless a student is doing it, and we do not want those innocent boys to get killed. A rail who knows his business always *pushes* with the club, never *pulls*. Judging from the picture, the man is twisting the tail by pushing. If he is, his fulcrum is wrong.—"Woody" (ex-brakeman, Great Northern), Honolulu, Hawaii.

Double Gage



By

N. A. CRITCHETT

Author of "The Speed War of the Century," etc.

Two Railroads Struggling for Supremacy; Both Have the Same Man as President

IT was a strange situation—two railroads were fighting each other tooth and nail; and the same man, Milton D. Hays, was president of both!

One was the Pittsburgh & Castle Shannon, a six-mile line serving the coal and steel capital of America. It extended from one of the South Side hills of Pittsburgh, Pa., to Castle Shannon, a suburb. There it connected with the Pittsburgh Southern, running to Washington, Pa., which was really a glorified spur line of the P. & C. S.

This extension, the Pittsburgh Southern, was thirty miles long, while the main line was only six. The contrast probably suggested Abraham Lincoln's remark about a nine-foot whistle on a six-foot boiler to the directors of the P. & C. S. Anyway, they gave much thought to this matter, and were exceedingly envious of the prestige and popularity of their southern rival. Finally they decided to do something about it.

But what could they do? They had neither ownership nor control of the Pittsburgh Southern. Milton Hays had built that road himself, without calling upon the P. & C. S. for any kind of financial assistance. The Pittsburgh Southern was serving a rich farm country; the local farmers had capitalized it, at the personal solicitation of Mr. Hays, and the six-mile connecting road had nothing to say about its operation.

It looked as if the P. & C. S. directors were licked at the start. However, the

Hays railroad owned no motive power or rolling stock; it borrowed such equipment from the northern rival. President Milton D. Hays of the P. & C. S. made out the lease to President Milton D. Hays of the Pittsburgh Southern, and both presidents were eminently satisfied.

For a while this arrangement worked beautifully. The Pittsburgh Southern continued to rake in the money of farmers who shipped agricultural products and traveled by rail to the Smoky City and who ordered manufactured goods from the city for use in the country.

And then, one bright May morning in 1878, the directors of the Pittsburgh & Castle Shannon Railroad struck what they thought would be the death blow to the Pittsburgh Southern Railroad. In a formal letter they announced to Mr. Hays that no more P. S. tickets would be honored by the P. & C. S. and that the lease of motive power and rolling stock was terminated, both rulings to go into effect at the end of thirty days.

Further than that they could not go. Mr. Hays would still be president of the Pittsburgh & Castle Shannon Railroad, through his influence with the men of wealth who had financed the construction of that road; but he was no longer permitted to use the P. & C. S. equipment on his private line. It was a neat scheme to force him to turn the thirty-mile railroad over to the little P. & C. S. at a bargain price, for the chief value of the Pittsburgh Southern lay in the fact that it could transport men and goods from the farm lands into the big city. If the thirty-mile road ended in a hayfield six miles from Pittsburgh, it wouldn't be worth very much as a freight or passenger carrier.

The P. & C. S. directors exulted as they planned. They rubbed their hands with glee. At last they had Mr. Milton D. Hays where they wanted him.

BUT Mr. Milton D. Hays was not the kind to lie down and let the wheels of Fate roll over him. The very day he received the board's notification, he called upon a financier by the name of Father Henrici, head of a cult known as the Economite Society.

This Society owned and operated the little narrow-gage Saw Mill Run Railroad. Mr. Hays had known Father Henrici for years, and although the two men were not reputed to be on friendly terms, Hays offered a proposition which the Economites were glad to accept.

Under the terms of this agreement, Hays would outwit the greedy directors of the Pittsburgh & Castle Shannon Railroad. To Father Henrici he explained the whole situation.

"They're squeezing me to the wall," said Mr. Hays. "Severing my road from the Pittsburgh & Castle Shannon and leaving me in the middle of nowhere without motive power or rolling stock."

"What does that mean to the Economite Society?" Father Henrici asked cannily.

"Just this," came the reply. "You lease me a right-of-way over the tracks of the Saw Mill Run Railroad. I'll pay you a fancy price"—he named a tempting figure —"and that will give me entrance to Pittsburgh. Then I'll connect with Castle Shannon, my northern terminus, by laying three miles of track; and I'll have a complete line all the way from Washington, Pa., to Pittsburgh without being bothered by the Pittsburgh & Castle Shannon Railroad. However, I must get this done within thirty days."

"But," questioned Father Henrici, "how can you use the Economite Railroad with its thirty-inch gage, while your road has a forty-inch gage?"

"Easy. We'll lay a third rail."

"And what will you do for rolling stock?"

"You leave that to me," Hays smiled reassuringly. "I've already started to do something about that. And in the meantime," he cautioned the Economite leader, "not a word of this to anybody outside of your Society."

Father Henrici pledged himself to secrecy. The lease was signed the following morning. Milton D. Hays was elated. Right now he held the ace cards. As presi-

dent of the P. & C. S. he was legally entitled to sit in at all meetings of the board of directors, and thus he could keep informed on what his foes were doing, while they had no means of learning the plans of the Pittsburgh Southern Railroad. Meanwhile, he could still use the P. & C. S. motive power and rolling stock, under terms of the lease which would not expire for nearly a month.

But Mr. Hays was confronted with a serious obstacle. In 1878 the P. & C. S. and the P. S. were almost the only two railroads in the country—indeed, in all the world—which had forty-inch gage. The P. & C. S., originally a coal road, had been constructed to fit certain coal cars which were used by mines of that vicinity. All of their equipment had been made especially to coincide with that gage, and when the Pittsburgh Southern had been built it naturally followed the same gage as the road it connected with.

"Which means," Mr. Hays thought ruefully, "I'm going to have a pack of trouble getting motive power and rolling stock on short order."

It was only too true. Ready-made engines of forty-inch gage could not be had for love or money, although Mr. Hays appealed desperately to all of the builders in the East. Not one of them had such an engine on hand, but all were willing to manufacture as many forty-inch engines as he could pay for, if only he'd give them time.

But time was mighty important to the hard-pressed railroad builder. Since he could not buy a forty-inch locomotive on short notice, and since his roadbed was not heavy enough to carry a heavier type, he succeeded in locating a twenty-four ton locomotive of thirty-six inch gage which the Pittsburgh Locomotive Works agreed to sell to him for $4,500.

He bought it. Then, looking around for rolling stock to fit such power, he found a small three-foot gage line in northwestern Pennsylvania and quickly made a deal with them for two passenger coaches, one baggage car and three flat cars. Buying these, he exacted a pledge of secrecy and ordered the equipment to be relettered with the name "Pittsburgh Southern."

While this was being done, progress was being made on the work of grading for the three miles of railroad to be built between Castle Shannon and the terminus of the Economites' railroad. This work was pushed with the use of the P. & C. S. equipment, which under the still unexpired lease the Pittsburgh Southern was permitted to use. The P. & C. S. directors fretted and fumed but could not do anything to stop the work.

IT annoyed those directors considerably that they could not penetrate the plans of Milton D. Hays. They knew nothing of the deal he had made for the Saw Mill Run right-of-way; in fact, it was commonly believed that the Economites were hostile to Mr. Hays. So no clue could be gathered in that direction.

They laughed at Hays for building what they thought was a blind road, three miles from Pittsburgh, just as Noah's neighbors laughed at Noah for building the Ark. But Hays did not give away his hand as Noah did. He let it be known that he had great faith in the future growth of the City of Pittsburgh, and that he would probably run a stagecoach line into the city until it grew out to meet the end of his railroad.

When this news got around, most of Hays' friends and enemies decided that he had gone out of his mind. Nevertheless, the railroad builder kept persistently at his task. Four days from the expiration of his thirty-day period of grace he sent this message to the Pittsburgh Locomotive Works:

"Rush that locomotive. I'll make the road fit it. Don't do anything but hurry."

Another message was sent to the road from which Hays had purchased the rolling stock, telling them that he was now ready for those cars. The P. & C. S. directors and their spies kept prowling around Mr. Hays and his operations, but so far they had learned next to nothing of his intentions, although they suspected he had some deep dark scheme up his sleeve.

Finally the last spike was driven connecting the Pittsburgh Southern with the Saw Mill Run Railroad, and on a Sunday morning, the day before the thirty days was to expire, the P. & C. S. directors emerged from church to see Hays and his gangs of workmen changing the gage of the entire length of his railroad to fit his newly acquired locomotive and cars! At the same time, the P. & C. S. forces were amazed and chagrined to see that the Hays men were spiking down a third rail parallel to the Economites' line, permitting three-foot gage equipment to roll over the tracks, as well as the Economites' thirty-inch power and cars.

Hays' locomotive had been brought to the tiny Saw Mill Run station on a low flat truck pulled by eight powerful brewery horses, a fire was built in her boiler, and soon she was on the tracks, pushing ahead of her a car of rails and other necessary material for the workmen.

In short time she reached the end of the Economites' road at Bankville and was on the three-mile extension of the Pittsburgh Southern en route to Castle Shannon, the junction point.

The Pittsburgh & Castle Shannon men were furious. They realized that their contract with Hays would not expire until Monday midnight. It was now Sunday and they would have to do something to block their rival before the courts opened on Monday, on which day they might hope to obtain an injunction.

Coming out of church, the directors, headed by a man named Pierce, held a hasty council of war. They realized that two sets of track-changing gangs in the employ of Milton D. Hays were rapidly nearing Castle Shannon, one from the north, the other from the south, but neither gang had yet arrived at that point.

Hays had already returned all of the P. & C. S. rolling stock and power, in order to clear his own road for the change of gage. The directors' forces induced Matt Rapp, their master mechanic to get up steam in one of their engines and run her out onto the main line, while other men would spike the switch and thus block the Pittsburgh Southern workmen.

The P. & C. S. men went even further. They lifted a rail so that the engine would fall into a culvert—gently, so as not to be damaged. This, they decided, would block their rivals even more effectively.

But it didn't. A few minutes later came the Hays engine over the hill, brightly painted and lettered with the words " Pittsburgh Southern." Her shrill whistle shattered the quiet Sabbath air. The track laborers were working industriously ahead of her.

WHEN this locomotive reached the one which had been ditched, Hays did some quick thinking. He had his men connect the two with chains. Then he forced his way through an angry gesticulating group of P. & C. S. men and climbed into the cab of his engine, brandishing a long-handled wrench.

" Get off the track," he bawled out, " if you don't want to be killed!"

Then, with a yank and a jerk, and with the aid of a re-railing frog, he got the P. & C. S. locomotive back onto the track. A short distance further on, the track had been torn up; its edges were perilously near a steep embankment. The Pittsburgh & Castle Shannon forces had done everything they could to make it difficult, not to say impossible, for Hays and his men to complete the change of gage within the specified time.

There was only one way to clear the track, and Hays did it. Disconnecting his rivals' engine, he gave her a powerful shove with his own motive power, so that she fell down the embankment, down to the rocks below, a battered steaming mass of twisted steel.

Matt Rapp, the P. & C. S. master mechanic, uttered a cry of rage and heaved a hammer at Mr. Hays. It hit a glancing blow, knocking him unconscious. That seemed to have been the signal for a free-for-all fight. With weapons and burly fists, the P. & C. S. men exchanged blow for blow until their opponents finally drove them off

the field. Such was railroading in the year of our Lord 1878!

By the time Mr. Hays recovered consciousness his entire railroad was consolidated and changed to three-foot gage from Washington to Pittsburgh. It was a spectacular triumph, and the Pittsburgh Southern employees further desecrated the Sabbath by giving vent to loud and prolonged cheers, to which was added the penetrating shriek of their one and only locomotive whistle.

That ended the Castle Shannon railroad war. The following day, which was Monday, Milton D. Hays resigned from the presidency of the six-mile rival, to devote his entire attention to his own line.

And that finishes the story, except that, years later, both roads were finally taken over by the great Baltimore & Ohio System.

International Engine Picture Club

SINCE the International Engine Picture Club was founded nearly five years ago more than ten thousand members have been enrolled. Practically every one has exchanged photos with, bought from, or sold to other members. In the vast majority of cases transactions have been carried by mail and in good faith; and each party has treated the other person as he expected to be treated.

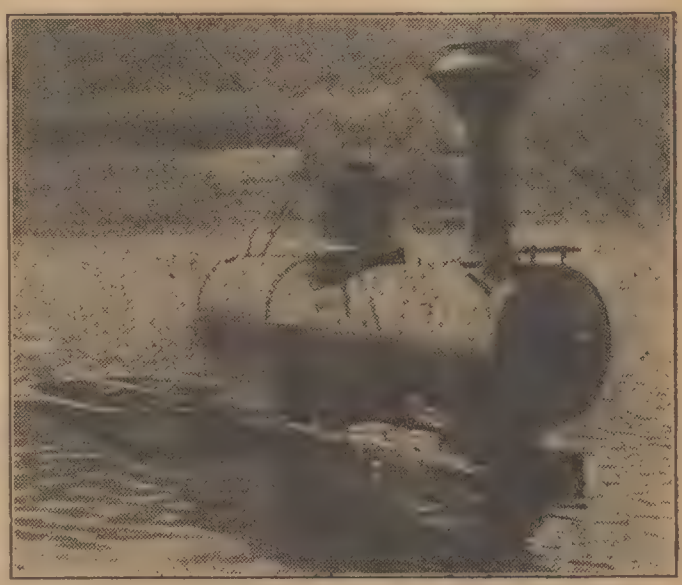


Photo by Railroad Photographs, 5 Appian Way, Allston, Mass.
Hoosac Tunnel & Wilmington (Mass.) Engine No. 1, the "Readsboro," 3-Foot Gage, 0-4-0 Tank, Built in 1884. She Struck a Rock Slide and Rolled into Deerfield River

As a result, we have had astonishingly few complaints of any kind; a few of them said that some members took too long to reply. The point is worth stressing. If you aren't prepared to answer letters you receive as a result of having your name printed in this magazine, we do not want to publish your name. And please answer promptly!

A few kicks were more severe. And while they were only a few, they were enough. They had to do with a petty type of ignoramus who, sent a dime or two in good faith, fails either to acknowledge the money or return the pictures he has promised, or who, say, promises three pictures for a quarter and then sends two. We call this guy an ignoramus because he doesn't realize that news travels and he is cutting his own throat, and that he is letting himself open for trouble because he is using the mails to defraud. Ignoramus or not; we want to get rid of that type. Tell us who he is. We'll take care of him.

* * *

And now for more pleasant news. We are glad to announce that Mr. Paul Warner, former advertising manager of the Baldwin Locomotive Works and editor of "Baldwin Locomotives" (see his article on page

44) has been appointed general manager of the Locomotive Photograph Co., 6354 West Market St. Station, Philadelphia Pa. Not only will pictures which appeared in "Baldwin Locomotives" be available to collectors, but also each month Mr. Warner will write brief historical sketches of old-time engines. These will be printed on gum paper and supplied with each old-time print purchased. This month, with every order for a dollar or more, a 4x5 photo of the "Pennsylvania Limited" taken by Mr. Warner in 1899 will be given free.

* * *

If you live near New York, here's your chance to meet America's foremost railroad journalist, Chas. F. Carter, author of the book "When Railroads Were New" and a frequent contributor to RAILROAD STORIES (see page 91). Mr. Carter will speak on "The Vagaries of Locomotive Development" at the first autumn meeting of the N. Y. Chapter, Railway & Locomotive Historical Society. Anyone seriously interested is invited: Friday evening, Oct. 11, in Room 1101, Engineering Societies Bldg., 29 W. 39th St., N. Y. City.

For information about the Chapter and its activities, including trips, address the Secretary, P. O. Box 434, Madison Sq. Station, N. Y. City.

* * *

The other day Mr. F. H. Somerville showed us the neatest blue prints of old-time locomotives, copied from original builders' drawings on the scale of a half-inch to a foot, that we have ever seen. These, we believe, will be the answer to the prayer of the model-builder or picture-collector who wants prints showing all details correctly. Mr. Somerville is offering these prints at cost. A set of four, 9x12 in., of Baldwin engines between 1832 and 1836 are $1, postpaid. Another set of six representative American engines between 1848 and 1878, varying between 11x22 and 12x27 in., are 40c. each or three for $1, postpaid. A 12x32 in. print of a standard NYC 4-4-0 of 1890, and a 12x35 in. print of a 4-4-2 of 1900, are 50c. each, postpaid. All may be had in black-and-white at slight additional cost. For further information write to Mr. Somerville at 79 West Essex Ave., Lansdowne, Pa.

Courtesy U. of C. "Pictorial History of Calif." and Milo Anderson, San Leandro, Calif.

The Railroad from San Francisco to San Jose, Calif., Originally Called the Pacific Atlantic, Was Opened to Mayfield in Oct., 1863, and Completed June 16, 1864. One of Its Trains Is Shown Near Palo Alto

READERS who collect, buy, sell, exchange, or make pictures of locomotives, trains, cars, etc., are listed here as members of the International Engine Picture Club. There are no fees, no dues. Names are published in good faith, without guarantee.

A membership button is given FREE to those who send in a "Readers' Choice" coupon (page 143) and self-addressed stamped envelope. (If you live in Canada or any foreign land, enclose a loose 3c stamp from your own country instead of the envelope.) Address Engine Picture Editor, "Railroad Stories," 280 Broadway, New York City. Tell him what you want or what you offer.

R. ADAMS, Chrisney, Ind., collects engine and wreck photos; send lists.

P. ALMGREN, Kvarnbergsgatan 44, Karlstad, Sweden, has a complete timetable and railroad map of Sweden to trade for best offer of pictures or clippings of European side tank locos.

A. ALTER, 1541 Winona Blvd., Hollywood, Calif., has many 122 size San Joaquin & Eastern, 10c. ea., 3 for 25c.

E. ANDERSON, 124½ Hennepin Ave., Minneapolis, Minn., has many engine and train snaps around Minneapolis; will send free snap to first 20 sending stamped envelope of either "400" or "Hiawatha." Also has 5x7 street car views at 20c. ea. or trade for three 116 size snaps. Blue prints of many roads to highest bidder.

E. L. ANDES, 1392 Webb Road, Lakewood, O., has NYC, MeC and Big 4 '31 time tables and Z&W, T&OC, K&M, K&WVa. up to '23 to trade for stamps, covers or other RR data.

H. T. ARMSTRONG, 219 W. 5th St., Oswego, N. Y., has photos of old RW&O, NYC&H, NYO&W engines.

R. G. AVERILL, 155 Kimberly Ave., Springfield, Mass., has June '33 Official Guide to trade for latest issue; wants any U. S. rosters, also CPR and CNR. Send 3c. stamp for photo list, 120 to 5x7 size, builder's.

J. AVERY, 805 N. 36th St., Ft. Smith, Ark., has KCS, Frisco, MoP and others to trade; send list for list.

H. F. BACH, 315 Hellerman St., Philadelphia, Pa., has Reading emp. schedules to trade for PRR or NYC.

B. H. BACON, 31 Atwater Ave., Derby, Conn., has postcard size New Haven "Comet," 3500, 3557, 3342 and B&M 3631, 10c. ea., 4 for 35c.

J. BALCAM, Box 834, Tulsa, Okla., has complete file "Railroad Stories" Aug. '30 to Dec. '33 (exc. Oct. '31) good condition, for sale or trade. Make offer.

J. R. BELL, 1114 S. San Joaquin St., Stockton, Calif., has over 70 railroad, Brotherhood and "Railroad Stories" mags., WP and Santa Fe train orders, emp. timetables, and Official Guide for sale cheap; wants SP, WP and Santa Fe photos.

J. F. BOOSE, 35 N. La Grange Road, La Grange, Ill., will trade 15 dif. 116 loco. snaps for loco. rosters, '34 or later, all roads entering Chicago, exc. C&NW, B&O, PRR; or will trade roster for roster. Also sells, trades buys 116 size Chicago roads.

R. H. BRADFORD, 603 Evergreen Ave., E. Lansing, Mich., will buy Apr. '33 "Railroad Stories."

R. BROWN, 341 Stanford Ave., West View, Pittsburgh, Pa., trades transfers and trolley photos.

E. C. CAUDLE, 910 E. 22nd St., Winston-Salem, N. C., starting; will appreciate your extra photos, clippings, timetables; will repay later.

A. de CHAMPLAIN, 32A Queen St. W., Ottawa, Ont., Canada, has many photos to trade or sell.

F. A. CLUTE, 1624 Ave. A, Schenectady, N. Y., has postcard NYC, MeC, T&OC, B&A, Big 4, 10c. ea., 13 for $1; also NYC colored postcard photos, 15c. ea.; 8½x10½ NYC 16-wheel flat car, etc.; send stamp for lists.

R. F. COLLINS, 26 Brickell Ave., Westwood, N. J., starting; esp. wants Erie, Sandy River and elect. interurbans.

R. CONNOLLY, 3237 North A St., Phila., Pa., beginner; grateful for extra photos.

J. COOK, 525 W. 4th St., Anderson, Ind., will buy midwest interurban photos, timetables before 1932, esp. UTofInd., THI&E, I&C, I&SE, NIP, etc.

A. H. COVERDALE, 1633-16 A St. E., Calgary, Alta., Canada, wants lists 120 size CPR engines.

R. R. COWLES, 619 Board of Trade Bldg., Indianapolis, Ind., collects train orders, clearances, emp. timetables of abandoned or consolidated roads.

B. DAVIS, Millbrook School, Millbrook, N. Y., has set of 18 diff. engines for 75c.; write first.

L. J. DIXON, Jr., 3610 Baring St., Philadelphia, Pa., has over 100 B&O negs., p.c. and 116 size, to sell; also will buy or trade for 130 size negs.

T. DONEGAN, 2030 Benedict Ave., Bronx, N. Y. City, has NYC or CRRofNJ loco. photos to trade for mountain heavy freight loco.

A. DORMIS, 130 Mt. Pleasant St., Frostburg Md., will send a L.I. timetable free to first 100 sending stamped envelope.

K. DUCAT, 1008 S. 28th St., Milwaukee, Wis., has 250 mag. and news pictures about 181 roads in loose leaf binder and 7 old Ives and Lionel catalogues, trade or sell; best offer takes.

J. C. ENGLE, 225 Easton Ave., Peoria, Ill., has 8x10 photo new tank ahead of SP engines; what offer?

R. EDWARDS, Box 206, Chelsea, Okla., will pay 35c. ea. for Oct. '33 and Mar. '35 "Railroad Stories." Write first. Colo. Mid. snaps for sale or trade.

R. ERICKSON, send us your address.

A. FARROW, 132 Tenth St., S. E., Auburn, Wash., has NP, GN, SP&S, PC, Mil., SI and many logging roads and short lines in Wash., to trade for NP photos or sell at 5c.; send dime for list and 2 samples.

F. J. FISHER, 1521 E. Preston St., Baltimore, Md., starting; wants western roads.

J. FLICKINGER, Norden, Calif., wants modern 116 or postcard size. Has SP Mallets, old Nev. City Nar. Gage engine, Hobert Southern snaps and information.

R. J. FOSTER, P. O. Box 375, East St. Louis, Ill., has 5,000 good 116 size pictures of 125 roads at 5c. ea. or trade for D&H, SAL, ACL, New Haven, C&O, Vgn., FEC and Southern; also buys or trades negs. Wants Baldwin Loco. Mags.

M. FRANCIS, 506 Rigsbee Ave., Durham, N. C., wants old passes, timetables, train orders and clearances.

J. H. FRETZ, 537 Derstine Ave., Lansdale, Pa., has 116 size Reading, LC, D&H, etc. and short lines north of Phila. to trade for 116 negs. N.J. and other short lines and 4-4-0, 0-10-0 and Mallets.

H. FRUDENBERG, P. O. Box 121, San Mateo, Calif., wants Pacific Coast locos., esp. SP, NWP, NP, WP, CNR.

J. E. GABLE, c/o Merchants Warehouse, 32nd & Walnut Sts., Phila., Pa., wants PRR and Burlington calendars; write.

H. R. GIBB, 1201 Butler St., Phila., Pa., has 116 size certain PRR, B&O, CRRofNJ, Reading '08 and BRB&L '07 at 6c. ea. Wants B&O 1310, "Director Gen."; L&N "Cornwall" and P&R bicycle engine.

E. L. GLAZE, 1613 Belt St., Baltimore, Md., will pay 5c. ea., 6 for 25c., for 116 size snaps western roads, esp. D&RGW, C&S, WP; send lists.

H. L. GOLDSMITH, 115-38 203rd St., St. Al-

bans, L. I., N. Y., has 120 size eastern roads for sale or trade for Atlantic types; send 5c. for list and sample.

L. GODDELL, Wishram, Wash., will pay good price for NP pub. or emp. timetables prior to '07.

R. F. GOODNOW, Millington, Mass., has 30 back nos. "Railroad Stories" '30-'33 at 15c. ea. postpaid; Packard's "Running Special," $1.

K. GRAY, 2843 Estes Ave., Chicago, Ill., has Lionel Mags., Pocket List Ry. Officials '33, RR data, many recent timetables to trade for Mar. '30, Feb., May, Aug., Oct. '32 and June '33 "Railroad Stories."

M. GREENBLATT, 307 Lutz St., Moncton, N. B., Canada, wants dope and photos on Intercolonial Ry. engines around Moncton and on abandoned line to Pacific Jct.

J. GRETEN, 145 E. 5th Ave., Lancaster, O., wants C&O photos and foreign equipment, esp. German.

L. E. GRIFFITH, 738 Hammond Ave., Aurora, Ill., has Burlington p.c. size engs. at 25c. ea. or trade for same size; also hundreds other prints.

R. L. HANGE, 3437 Wenonah Ave., Berwyn, Ill., has many 5x7 SP, SP&S and NP photos at 15c. ea., and postcard CB&Q 4952 at 10c. Will trade 3 above for Apr. '32 "Railroad Stories."

B. HEBERGER, 174 Remington St., Rochester, N. Y., wants Dec. '29, July and Nov. '32 "Railroad Stories."

R. HERRMANN, 725 Wyoming St., San Antonio, Tex., starting; wants help.

V. HILGERMAN, Box 30, Crete, Ill., wants Dec. '29, Jan.-June, Oct. '30'; Dec. '33 and Jan. '34 "Railroad Stories."

H. R. HILL, Bernardsville, N. J., will send list, incl. many C&NW, CM&StP, Burlington, PRR, M&E, D&H, etc., for 3c. stamp.

F. H. HUBBARD, Editor "Railroad Stories," 280 Broadway, N. Y. City, wants Apr. and May '30 "Railroad Man's Mag." in exchange for 6 mos. subscription. Write first.

R. HUBBARD, 1616 N. Felton St., Phila., Pa., will sponsor cachet for golden anniversary of completion of CPR main line, Nov. 7, 1885. Cover will be mailed from Craigellachie, B. C., where last spike was driven, to anyone sending him 5c. before Nov. 1.

D. JAMES, 915 Arch St., Zanesville, O., has Aug., June, Nov. '33; Dec. '34; Mar., Aug. '35 "Railroad Stories" for sale 50c. plus postage.

C. JOHNSON, R.R. 3, Ridgetown, Ont., Canada, will buy MC and Pere Marquette engines.

J. B. KERULIS, 4142 S. Campbell Ave., Chicago, Ill., has many 2¼x4¼ maps of roads around Chicago to trade for ACL, Rock Island, CGW, Erie, GTW, LV, etc. snaps, or will buy.

A. KUEHL, 230 E. 4th St., Brooklyn, N. Y., starting; wants to exchange negs., negs. to be returned when prints are made.

JOS. LAVELLE, 4615 66th St., Woodside, Long Is., N. Y., just back from a long trip, offers special 24 postcard size or 10 5x7" prints for $1.50, until Apr. 30, 1936. List can be had of small roads; books will be loaned on large roads.

L. LALOR, 3 Mackay Ave., Glenhuntly, S.E.9, Victoria, Australia, beginner.

A. F. LAMBORN, 775 N. Florence St., Springfield, O., has Ohio and Ind. railroad maps and Big 4 "19" and "31" train orders for sale or trade.

R. K. LEAR, 237 S. Quince St., Lebanon, Pa., starting; wants to trade with different localities.

A. W. LEKSTROM, 154 Cedar St., Manistique, Mich., has complete timetable and RR map of Sweden to trade for best offer of pictures or clippings of European side tank locos.

S. C. LOWE, 105 Marquette St., Quebec City, Canada, starting engine photo collection.

J. LUSK, 2022 Del Norte St., Berkeley, Calif., has 120 and 116 sizes SP, NP, UP, and others at 4c. and 5c. resp.; wants to hear from French and German fans.

H. P. LYNCH, 850 E. 17th St., Brooklyn, N. Y., has many recent issues "Railroad Stories" and small maps for sale.

G. MACKEY, 211 E. Jefferson St., Stockton, Calif., wants SP, WP or Santa Fe lists.

B. MacGREGOR, Jr., Bolling Springs, Pa., beginner.

C. MAHON, 16 Louise St., Truro, N. S., Canada, wants CNR and CPR engine photos.

W. C. McLAREN, 404 Winnetka Ave., Winnetka, Ill., wants 120 size engine and wreck photos of C&NW. Milwaukee and other midwestern roads.

E. H. MERRILL, 261 Middle St., Portland, Me., has few prints of Sandy River RR and of "Pepper Sass," first Mt. Wash. RR. engine; also makes copies of old pictures, neg. and 1 print, p.c. size or smaller, 60c. postpaid.

R. P. MORRIS, 214 Gelston Ave., Brooklyn, N. Y., will send free sample and list for 3c. stamp.

L. ODDS, 32 E. 7th St., N. Y. City, has book "Modern Engineering Practice" to trade for book on Diesel-elec. locos.

R. M. PARK, 4151 School St., Chicago, Ill., wants data, photos or photo-drawings of historic locos from 1837-80; NP "Minnetonka," "Camden & Amboy," "John Stevens," etc.; has early B&O, IC, World's Fair locos.

P. B. PATTERSON, 2584 Pearl St., Detroit, Mich., has 50 diff. views of WVaMid. and ET-&WNC (both 3-ft. gage).

H. PEARSON, 120 Main St., Ossining, N. Y., has set 30 p.c. and 5x7 photos, old and new power, for best offer; also has calendars and 20x40 side view NYC 5297.

H. PHILLIPS, Box 543, Medfield, Mass., wants following issues "Railroad Man's Mag.": Oct. '07; May, Aug. '09; Apr. '10; Jun. '11 and '14; Nov. '18 and Jan. 4 and 18, 1919; has many other back issues for sale or trade.

B. POWERS, 11727 Church St., Chicago, Ill., has St. Jo. & Grand Is. 1910 Rule Book to trade for loco. snaps, blueprints, etc.

H. M. PREVIS, 210½ S. Central Ave., Glendale, Calif., starting; wants to hear from local fans.

G. F. PREHM, 33 Royalston Ave., Minneapolis, Minn., wants photos of large power, esp. Beyer-Garratt.

H. L. PRICE, P. O. Box 76, Norcross, Ga., has new large list of 116 and postcard size photos; send 10c. for list and 116 sample, 15c. for list and p.c. sample. Wants old-time prints and negs. or certain modern type of Southern Ry. and other southeastern roads.

J. M. PROPHET, 3rd., 827 Delaware Ave., Buffalo, N. Y., has 3x5 PRR engines for sale or trade; wants 116 size or larger PRR engines; will answer questions on PRR engines for 3c. stamp.

E. J. RATZ, 2819 Shenandoah Ave., St. Louis, Mo., has many railroad, old-time songs, poems and phonograph records and street car transfers to trade. Sells trolley snaps, 3c. ea., 2 for 15c.; send stamp for list and details.

M. RAUCHER, 461 Williams Ave., Brooklyn, N. Y., wants to trade ry. mag. clippings for trolley photos and transfers.

C. E. REDER, 1311 Hood Ave., Chicago, starting collection of unusual cars and motive power such as 12-wheeled flats, etc.; send lists.

R. K. REEVE, Newton Square, Pa., wants good side views of 0-4-0s and 2-6-0's.

K. C. REINHARDT, 404 S. Government St., Lincolnton, N. C., has many emp. timetables at 15c. ea.; will sell first 6 copies "Railroad Stories" for 1931 or trade for emp. timecards.

W. M. RIGNEY, 1321 D St., N. E., Washington, D. C., has July '35 Official Guide, '25 Pennsy and Wash. Term. Rule Books, to trade for photos all roads, esp. New Haven and NYC.

H. RIGOR, 120 Meeks Ave., Muncie, Ind., has 116 and 616 size NKP, B&O, PRR, C&EI, NYC prints; sample and list, 10c., or 3c. stamp for list only.

R. ROBINSON, c/o Morrow, R.R.3, Orangeville, Ont., Canada, starting.

J. RODEN, 56 Lexington Ave., Maspeth, N. Y., beginner.

C. ROEDER, 6200 Walnut St., Pittsburgh, Pa., has PRR emp. timetables to trade for negs.; send 3c. stamp for PRR orders, 5c. for list and sample.

E. C. ROSE, 61 Park St., Truro, N. S., Canada, has few CNR engines; wants freight locos. in Canadian Rockies.

A. RYNEARSON, 219 Main St., Flemington, N. J., wants photos of PRR Classes B-27, C-30,

C-31, D-26, E-7sa, E-22, F-1, F-24a, F-26, G-34s, H-32, H-33, etc.

F. W. SCHLAAK, P. O. Box 343, Fond du Lac, Wis., will sell 12 Australian loco. photos, rotogravure pictures of Cleveland Union Term., street ry. historical booklet, employees' time-table rule book and pass of now-aband. Wis. Electric Ry.

A. A. SCHRUM, 145 Churchill Ave., Trenton, N. J., will buy 116 size U. S. negs. or trade PRR and Reading negs. for them.

S. E. SCURRAH, 1028 Pandora Ave., Victoria, B. C., has Vancouver Island engines.

R. SEARLE, 526 41st St., Oakland, Calif., starting; wants help.

J. M. SIMS, 441 Belmont Ave., S. Jacksonville, Fla., has FEC 100, 200, 300, 400, 700, 800 class engines, also coaches and freight cars at 5c. ea.

C. A. SMALLWOOD, 347 2nd Ave., San Francisco, Calif., has many 116 size street and interurban car snaps for sale or trade; will trade a "Car Builders' Cyclopedia" for "Electric Railway Dictionary."

A. P. SMELSER, c/o Santa Fe Ry. Co., Sun City, Kan., will sell or trade PRR, NYC and Santa Fe calendar pictures; also collects and trades RR poems.

C. SMITH, c/o Woodbury Lake House, E. Calais, Vt., will trade 2 detective, air or western mags. for 2 back nos. "Railroad Stories" as long as supply lasts.

S. SMITH, New Market, Ia., has 116 size CB&Q snaps to trade. Will trade 5 Burlington train orders and clearances for one 116 size photo; also has several "Railroad Man's" '17-'18 for sale.

S. J. SOLEDY, 7354 Ingleside Ave., Chicago, Ill., starting a trolley transfer collection; will trade 5 Chicago (all diff. lines) transfers for 2 others.

D. STAGG, 200 N. Park Ave., Park Ridge, Ill., collects engine snaps, timetables and motive power data.

D. E. STEFFEN, Peshtigo, Wis., wants photos, plans and technical data on C&NW Class H, 4-8-4 type; write first.

H. G. STEINMEYER, 174 Nixon Ave., Tompkinsville, S. I., N. Y., needs certain classes post-card size B&O engines.

H. E. STROTHARD, Springhill, N. S., Canada, has CNR, CPR, Cumberland Ry. & Coal, Maritime Coal Ry. & Power Co., and industrial engine photos; wants GTW, GT power and CNR engines 43,214, 3000, 42000 negs. Has Oct., Nov. '32 and Jan., Feb. '33 "Railroad Stories" for sale or trade for Apr.-July '32 issues, or will buy.

P. H. STRINGHAM, 303 Lydia Ave., Peoria, Ill., will trade steam or electric views for electric line prints.

R. SUTOFF, 440 N. Alvarado St., Los Angeles, Calif., beginner; send lists of photos and rosters.

S. C. MICKLER, P. O. Box 411, Tampa, Fla., will send 12 copies "Railroad Stories" each month to persons who will send him current used stamps of their countries, esp. Australia, New Zealand, S. Africa, Philippines, Gt. Britain, India, China, Japan, Canada; write for further details.

T. TABER, 43 Hillcrest Rd., Madison, N. J., buys old issues of Baldwin Locomotives, loco. builders' catalogs, other old railroad books. State condition, price.

D. THICKENS, R. F. D. Box 196, Walnut Creek, Calif., has 116 size Oregon Elect. at 6c. ea.; postcard Visalia Elect. 10c. ea.; also many other Calif. steam and electric roads; send 1½c. stamp for list.

G. THOMAS, 401 Fulton St., Millville, N. J., will trade emp. summer '35 schedule timetable of Penn.-Reading Seashore Lines for best offer in old views of Pennsy 4-4-0, W.J., Atlantic City or Rdg. locos.; write first.

J. THOMAS, 240 Gourlay St., Springburn, Glasgow, N., Scotland.

H. L. TILTON, 549 Linden Ave., Woodbridge, N. J., will trade or sell 116 size prints and negs. of over 50 roads; write for list.

G. VIGOR, 210 Evona Ave., Plainfield, N. J., has CRRofNJ and B&O photos at 5c. ea., or trade for others or Aug. '34 "Railroad Stories."

F. M. WALKER, 901 Brady Ave., E. St. Louis, Ill., has hundreds IC and Alton train orders and clearances to trade for others, esp. southern and western; or will send same for a 3c. stamp ea., while they last.

L. WALTER, 34 Highview St., Norwood, Mass., has many mags. '30-'32, "Argosy" serials bound in book form and foreign and U. S. stamps to trade for engine photos; also wants Apr. '32 "Railroad Stories."

B. H. WARD, 658 Third Ave., San Francisco, Calif., wants lists of narrow-gage snaps; H. J. Gabriel, please write.

F. W. WEINGETZ, Jr., 8761 118th St., Richmond Hill, N. Y. City, has 116 and p.c. size NYC, B&A, Erie, DL&W, New Haven, LV and others; also timetables of 50 Amer. and foreign roads—all to trade for any railroad material. Lists and sample print, 10c.

R. WILSON, Jr., 86-10 117th St., Richmond Hill, N. Y., will send free PRR waybills for stamped envelope as long as supply lasts. Has LI, PRR, MeC, PM, Wab., NKP, SV, Rdg., and others at 4c. ea., 7 for 25c. or trade.

G. V. WINCHESTER, 93 E. 23rd St. Mt. Hamilton, Ont., Canada, trades, sells and takes orders for CNR, CPR, TH&B, NYC and 116 size photos.

R. F. WINSTON, 866 E. Chester, Jackson, Tenn., has GM&N, (incl. streamliner "Rebel") M&O, NC&StL, IC power.

E. F. WOLF, R.2, Boyertown, Pa., has many geographic mags. to trade for emp. timetables, "19" or "31" order, engine photos, etc.

J. A. WOOD, Deroche, B. C., Canada, will trade CPR engines for others.

P. ZIEGENHAGEN, 8045 S. Laflin St., Chicago, Ill., has comp. vol. Lionel Mags. and post-card view D&H 653 to trade for loco. snaps or back nos. "Railroad Stories."

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Proposed Abandonments

Great Northern, Republic to Knob Hill Spur, Wash., 5 miles; St. John and Walhalla, N. D., to boundary, 8 miles; Manistee & Repton, Monroeville to Frisco City, Ala., 9 miles; Minneapolis & St. Louis, 126 miles of line in Iowa (permission granted). Northwestern Pacific, Fulton to Duncan Mills, 23 miles. Southern, Roseland to Williamson, Ga., 40 miles. Pearl River Valley, Goodyear to Etal, Miss., 20 miles (permission granted). Bartlett Western, entire line from Bartlett to Florence, Tex., 23 miles. Boonville, St. Louis & Southern (MoP), Boonville to Versailles, Mo., 43 miles. Colorado & Southern, Connors to Falcon, Colo., 65 miles. Northern Pacific, Centerville to Walkerville, Mont., 4 miles.

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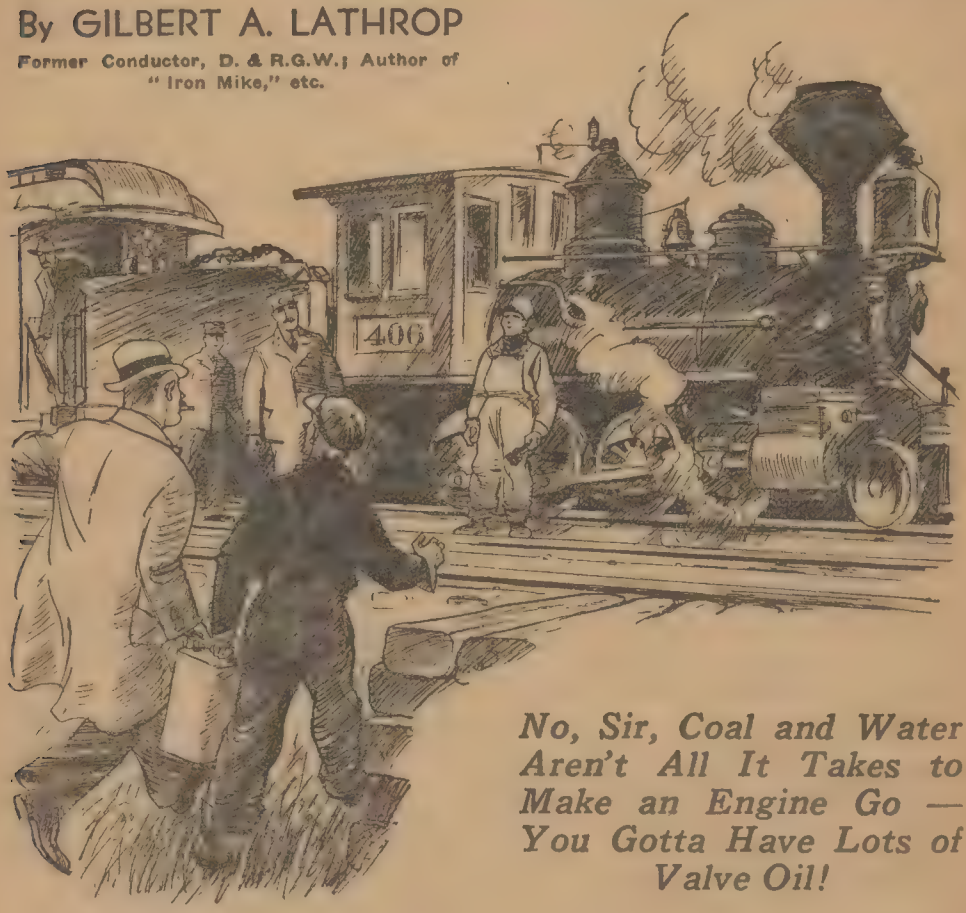
Master Mechanic's Blood

By GILBERT A. LATHROP

Former Conductor, D. & R.G.W.; Author of "Iron Mike," etc.



No, Sir, Coal and Water Aren't All It Takes to Make an Engine Go — You Gotta Have Lots of Valve Oil!

GRANT W. STONHAM, new general manager of the Narrow Gage & Western Railroad, got briskly to his feet, holding a sheaf of papers in his hand. Mr. Stonham was a big man with a big job on his hands. He crossed to a window and studied the maze of narrow-gage tracks, where a couple of thirty-ton switch engines were shunting loaded coal cars.

In the distance he could see a smoke plume from the 406, getting ready for the crack passenger train of the N.G.&W. At the throttle of the 406, he knew, was old Harry Dobbet. Well, Dobbet was a good man and he was running a good train. Making good money, too. That's what the road needed, more money. Bigger profits.

Business was just beginning to come back after the panic of 1907. The board of directors had sent the new G.M. out here to Cleora to take hold of things. Mr. Stonham was not impressed by Cleora. The town still showed the results of the panic. Only

this morning he had stepped into the bank to transfer his savings from the East. Had the president of the bank seemed a little too anxious to make the transfer, or was Mr. Stonham only imagining things?

The G.M. shrugged away a trace of worry and brought his thoughts back to the railroad. No time to ponder over bank problems when the road needed all his attention.

The N.G.&W. traversed a country navigable only by half-pint locomotives and two-ounce rolling stock. It kinked and looped over the Continental Divide on a four per cent grade, four feet of rise for every hundred feet of track.

From the busy yards Mr. Stonham's gaze crossed and rested on the twenty-stall roundhouse. All the doors were open, showing the black snouts of engines. At the sight of those engines he frowned. He counted twelve of them, all tied up for repairs. Turning, he faced the division superintendent, who had just come in.

"Mr. Worth," he said, "our valve oil consumption is staggering."

Cyrus Worth nodded tiredly. Sure, the valve oil consumption was staggering. It took plenty to lubricate those saturated little narrow-gage engines on the drag over Old Baldy Pass. And valve oil was expensive, costing the company $1.30 a gallon. It was made from animal fats and fed into working cylinders with force feed lubricators.

"Perhaps I'd better send for Jim Beasly," suggested the super, referring to the master mechanic.

"Do that," said Mr. Stonham.

IT didn't take long for Beasly to hotfoot it across from the roundhouse. Beasly had been working under one of his pets and a large smudge of black oil smeared his left cheek. His hat had originally been brown, but now a quarter of an inch of solidified grease coated it against the rigors of sun and storm alike.

"You sent for me?" he asked the G.M. in a voice that wheezed like leaking packing on the air end of an eleven-inch air pump.

"I did." Mr. Stonham rustled the paper under the master mechanic's nose. "I have here a report of valve oil consumption over the past six months. The amount is excessive."

Jim Beasly mopped the back of a grimy hand across his forehead. "I know. I've cut an' cut on valve oil until now—now—y'know what our engineers are callin' it?" he asked half angrily.

The general manager shook his head. It made little difference to him what they were calling it. By any name valve oil was a mighty expensive commodity.

"'Master mechanic's blood,'" snorted Beasly. "That's what they call it—not that I blame 'em much. We measure valve oil out to our engineers with eye-droppers. If somethin' goes wrong they're up against a mess of scored valves. You see, our narrow-gage engines ain't equipped with piston valves. They use slidin' valves that take more oil."

Mr. Stonham shrugged that aside. "I find the roundhouse in Gilson is short over two hundred gallons—two hundred gallons of valve oil they can't account for!"

"That's from stealin'," the M.M. said baldly.

"Stealing?" prompted Mr. Stonham.

"Yes, sir," explained Beasly, who was a good company man. "Owin' to the limited allowance we give 'em I

guess some of our engineers are pilferin' a few pints or quarts every chance they get."

The new G.M. smiled grimly. "Now," he breathed, "we're getting some place."

"Yeah," uncertainly.

"Among the three dozen engineers working over Old Baldy Pass you probably have occasion to suspect certain ones more than you do others, haven't you?"

"I expect we have."

"And one of them is perhaps the biggest thief of all," went on Mr. Stonham implacably.

"Well, I wouldn't openly accuse any engineer—"

"Not necessary. We must have a program of rigid economy. From appearances, in order to get such a program it will be necessary to set an example. Now if you'll tell me all you know about this valve oil pilfering—"

Beasly hesitated. He was not exactly a spotter, but the G.M. was entitled to know certain facts. Besides, he'd warned Dobbet lots of times and the old runner had only laughed at him.

"Well, there's an engineer named Harry Dobbet. You've probably heard of him?"

The general manager nodded, and Beasly went on:

"Harry's been running the 406 ever since she came new from the factory. She's got a set of valves that would be the pride of any engineer in the world. Harry always has plenty of valve oil. He never signs a pink ticket. The foreman in Gilson tells me that every time Harry leaves town the oilhouse is short from a quart to a gallon of valve oil. He ain't never caught Harry takin' any—"

Mr. Stonham nodded and made hasty notes on the back of his sheaf of papers. "Fine," he said when Beasly ended. "That will be all. Thank you."

Jim Beasly went out frowning. Mr. Stonham called for a stenographer. "I wish to put out a new bulletin addressed to all engineers on the N.G.&W.," he told her.

After the bulletin had been dictated to his satisfaction, the general manager turned to the harried super. "Mr. Worth, order my private car made ready for an inspection trip. I'll stop over a day or so in Gilson."

"Yes, sir. And you wish to leave?"

"Day after tomorrow."

AT the precise moment Mr. Stonham was ordering his private car for a trip of inspection, Engineer Harry Dobbet was grunting from the gangway of his little thirty-five ton engine, the 406.

Unlike the general manager, Harry Dobbet was a runt of a man. His chubby cheeks were covered with a hoar frost of whiskers and his hair was gray, although he was as spry as a three-year-old colt for all the thousands of nights he had pounded over Old Baldy Pass.

His engine was a 2-8-0 Baldwin with a diamond stack. She rarely went to the back shops, for the simple reason that Harry personally attended to her mechanical needs. Harry was proud of the 406, and no hill conductor ever said he didn't handle full tonnage on the grind up the Pass.

Harry grasped his long oiler in his right hand and carried a ball-peen hammer in his left. As he hit the cinders his eyes wandered over to the roundhouse with its row of dead engines waiting for repairs. Those disabled little teakettles had been growing into a small metal army lately, ever since

that last cut in valve oil allowance. Most of them were lame, or their valves out of square.

At the thought of oil Harry's gaze darted furtively, hopefully, toward the oilhouse. The hopeful look faded when he saw the supply man lolling beside the open doorway. Harry turned his attention back to his engine.

"They'll never put you in th' back shops because of scored valves or cylinders," he said to the 406, and patted her grimy belly.

He was smiling again as he began prodding in packing boxes with the snout of his long oiler. It took a resourceful hogger to buck industrial economy, and Harry was resourceful.

This morning Harry was on the train engine. He had put his scant valve oil allowance in his lubricator before leaving Cleora. He kept a weather eye on his lubricator feeds, watched the globules of oil flow up through the scalding water inside the sight glasses, and inwardly glowed with satisfaction.

Just so long as those drops of oil flowed upward, the valves and cylinders were lubricated. But they must flow much closer together than a bone-headed mechanical department decreed if scored valves were to be avoided.

EIGHT miles out and fifteen hundred feet higher than when they started, his reverse lever gave its first warning clank. Harry got off his seat box and squinted at the sight glass in his lubricator. It was as dry as a desert bone. He'd used his allowance in less than nine miles. The reverse lever clanked harder and harder and the valves began to squeal for oil.

Harry shut off the steam feed on his lubricator, dropped down in the gangway with his tank bucket and filled it. The cold water he poured over the condenser chamber to cool it. Then with a grin of satisfaction he unlocked his oil box and pulled out a quart can of valve oil.

"Beasly an' his valve oil economy!" the engineer said sarcastically.

At Mears, twelve miles out, he made a nice spot for the water tank. Then, climbing from the cab, he ducked between a string of empty single-deck stock cars and headed toward an abandoned cellar on the other side. In a dark corner of the cellar he bent over and groped through a pile of refuse. When he straightened, the little hogger was holding a gallon can filled with valve oil.

He hated to use any of his precious valve oil, which had been accumulated through months of strategy. Honest as the day is long, Harry Dobbet was not above pilfering an occasional quart or gallon. To him it wasn't stealing. If the railroad company didn't care how valves were starved on their engines, he did. Taking valve oil to allay the anguished squealing of dry valves was about the same as borrowing a cupful of milk from a fat dairy cow to feed a hungry orphan. It was a little irregular, but humane.

As the train wound around the points on the last leg of the climb to Old Baldy Pass, Harry consoled himself with the knowledge that he could replenish his valve oil hoard in Gilson, where unwelcome oilhouse men didn't stand guard over the doors.

NIGHT had hung a star speckled cloak over Gilson by the time Harry halted the 406 on the cinder pit. Before leaving his engine he took up the oil can that he'd borrowed from his cache at Mears. It was now empty. In a black corner near the sandhouse he hid the can, and then went on to

the roundhouse to make out his report.

When he finished his clerical work Harry thumbed through the bulletin book to see if any new notices were posted there. There was one—one that made the whiskers stand straight out from his cheeks.

All Enginemen, N. G. & W.:
It has been called to our attention that pilfering of valve oil is taking place at points where oil supplies are located. This practice must stop at once. The mechanical department has figured the amount of valve oil necessary to lubricate locomotives over different parts of the division and you will be supplied accordingly.—G. W. Stonham, Gen. Mgr.

Mumbling to himself, Dobbet turned and went out into the darkness toward the oilhouse. In recent years a number of master keys had been issued to various departments; these keys would open nearly any railroad padlock. Harry had worked for the company ever since the line was built, and he was ingenious. He felt along the oilhouse door until his fingers found the lock. As they felt over it, the little hoghead began mumbling again. A new lock was there, a lock he had no key to fit!

Next morning found a worried Harry going east with twenty cars of coal and a double-header. He had put his allowance of oil in the lubricators and set the feeds so they would use the least possible amount. Then he sat back and thought over his numerous caches along the line. There was one at Parlin, almost a five-gallon can full. Another was at Crooks, nearly a gallon in that one. At various points along Old Baldy Pass were other amounts ranging from a pint to a full ten-gallon can. He knew his lubricator contained enough oil to get him to Crooks, so he could leave his five gallons at Parlin intact; but during that trip he was forced to use every precious drop of his one-gallon cache at Crooks.

When Harry came back to Cleora two of his stores were used up; and there was mighty little chance of replenishing them. Now every scissorbill roundhouse man watched the oilhouses and ladled out the oil with an eye-dropper, so to speak. "Master mechanic's blood" was a good nickname for it.

HARRY'S call to work the following morning did not add to his peace of mind. The caller, a gangling youth of eighteen or so, told him excitedly:

"Mr. Stonham is makin' a tour of inspection on his private car, the B-8. You're called to handle him, an' don't forget to do it gently, especially when he's sittin' at the dinner table with gravy on his plate. You leave here at six A.M."

The engineer ate breakfast in morose silence. What chance would he have of adding to his diminishing store of valve oil with the general manager—the fellow who had put out that oily bulletin—looking down the back of his neck?

But he accepted the call and was at the roundhouse promptly. Another of those new-fangled locks was on the oilhouse, and his tallowpot contained only the usual seven-eighths of a pint of master mechanic's blood. Harry dumped the stuff in his lubricator and steamed out on the main line, where he found the B-8, coupled behind a caboose. Mr. Stonham was on the ground when Harry made a bumpless coupling against the caboose.

The general manager walked up below the cab. "Mr. Dobbet, I believe?"

"Yes, sir," said the hogger.

"Listen, I want to stop along the line at various points to look over our property; I also want to be at Gilson by evening."

"Yes, sir," agreed Harry, and added: "But I need a little extra valve oil."

"You've been given your usual allowance, haven't you?" snapped Mr. Stonham, as he turned and walked back to his private car.

Harry climbed into the cab and reached for the whistle cord. "Usual allowance!" he snorted. "Well, it ain't near enough." The bitterness in his heart was hard to bear.

OWING to the exacting inspection Mr. Stonham made at every section house and water tank en route, it was night before they pulled into Gilson. The engineer had been given no chance to get more oil from his cache at Parlin. Now he was in Gilson with a well-filled oilhouse that was guarded by a new padlock, and the 406 with squealing valves. He would be issued the measly half-pint to make his run back to Cleora. The air pump alone would need more than that!

After Mr. Stonham's car was set out and the 406 spotted on the cinder pit, Harry silently stole into the night. Perhaps the oilhouse was unlocked. He found the empty gallon can where he'd hidden it and hurried across to the oilhouse. The lock was in the hasp, apparently snapped shut. But the supply man, in his hurry to draw Harry's scant allowance, had not clicked the padlock when he closed it.

Harry opened the padlock and removed it from the hasp. Smiling at his good luck, the intruder entered and felt his way along to the valve oil barrel. Steam coils under the metal container kept the viscous fluid hot enough so it would run freely. The little fellow placed his gallon can under the valve and opened it.

The oil ran slowly. Harry kept lifting the can to see how it was filling. The green fluid slowly drew near the top of the can. Another pint and then . . .

A STABBING beam of silver light flashed over Harry's squatting form. An accusing voice shattered his solitude. "SO-o-o!"

No one but a general manager could put such inflection into so short a word. Harry straightened defiantly. He had closed the oil valve and was holding the can in his hand.

"Just gettin' a little valve oil, Mr. Stonham," he faltered. "Didn't seem to find the supply man around anywhere."

"You read my bulletin?" asked Mr. Stonham coldly.

"That one about valve oil? Sure, I read all bulletins as soon as they get posted."

"Very commendable of you, indeed. But it doesn't detract from the fact that you are stealing valve oil."

"Stealin'?" There were doubt and anger in Harry's voice.

Mr. Stonham was scowling now. "Yes," he said. "You shall be severely disciplined for this. Such irregularities must be stopped at once."

"Stealin'?" repeated Harry. Nobody in his whole career had ever accused him of stealing. The whiskers on his chubby cheeks bristled and his chin came up.

"Listen, Mr. Stonham," he flared up, "would you call it stealin' if a feller took a bread crust to save a life? If you would, then I'm stealin'. An' I'm proud of it. I'm tryin' to save th'

life of my engine, th' 406. You may think you're savin' this N.G.&W. a lot of money. Well, it's not so, especially about valve oil."

Harry's voice was raising until now it was a cracked treble. He stood up on his toes, thrusting his face close to Mr. Stonham's.

"Have you stopped to wonder just why all your engines are tied up for repairs in every roundhouse on this railroad?" he demanded. "If you ain't, I'm gonna tell you. They been starved for valve oil—starved because somebody wants to economize—"

"Dobbet!" Mr. Stonham cut in. "We don't allow insubordination on this road. You know what that means?"

"What it means?" Harry's voice trembled.

"Exactly! You're fired! Get your things together and turn all company property in your possession over to the roundhouse foreman here in Gilson. I'll order a man out of Cleora to relieve you." The G.M. walked stiffly away, leaving Harry staring after him.

The old hogger drew a deep breath and his body stiffened with resentment. He started to shout defiance after the official, but instead he reluctantly set down the gallon can of oil and shuffled off into the shadows.

"Insubordination," he muttered. "Fired—after all these years—simply because I hate to see valuable machines ruined by damn-fool economy!"

EARLY the following morning Harry entered the foreman's office carrying his oilbox in one hand, his heavy toolbox in the other. He set them down in silence, then mopped his beaded forehead.

"That's about all th' company property in my possession," he said.

"I know, Harry," the foreman was sympathetic. "The Old Man told me all about your being pulled out of service. I'm sorry, Harry. You've been a good man, and the Brotherhood has a good chance to fight the case."

Since the eastbound passenger didn't arrive in Gilson until 8 P.M., Harry wandered uptown. Gilson was quite a bustling little city.

The former engineer crossed an intersection and then paused to make some sort of decision. His eyes took in the First National Bank and he recalled his wife's warning about their savings in Cleora, before his last trip.

"There's a mighty lot of talk about the bank, Harry," she had said. "Some think it ain't safe as it ought to be. Maybe we'd ought to draw out our savings an' transfer them to the First National over in Gilson."

Harry had reassured her and forgotten about the incident until now. But now—suppose the institution in Cleora were not as safe as it should be? What would happen to the two of them—if their life savings were suddenly wiped out? Then suddenly someone clutched both his arms, and he heard the words:

"For Pete's sake, Harry, get down to th' roundhouse as quick as yuh can!"

Harry faced the excited engine crew caller holding onto him.

"But I'm fired," Harry responded tonelessly. "Why should I go there?"

"Don't know nothin' about that," the caller rapped out. "G. W. Stonham sent me out to find yuh, said to drag yuh to th' roundhouse if I had to hog-tie yuh. Come on!"

As he spoke, the youth was leading Harry in the direction of the railroad yards.

No. 406 was in front of the depot,

coupled to Mr. Stonham's private car. The general manager was pacing back and forth beside the engine. Several men, heavily armed, stood near the B-8.

At sight of the forlorn old engineer, Mr. Stonham stopped pacing and rushed to meet him. The official was visibly excited.

"Dobbet!" he greeted fervently. "You've got to get my private car to Cleora as fast as you can turn a wheel! I've removed all speed restrictions and given you rights over everything. Your engine is ready. Let's get started."

Harry looked about uncertainly. He was plainly puzzled. "But what's th' trouble?" he quavered.

The answer came quickly. "The bank in Cleora—there's a run on it and they've wired the bank here in Gilson to send them a hundred thousand dollars cash to halt the run. They'll hold 'em off long as possible, but if we don't get that money to them, our bank in Cleora will have to close its doors."

Harry's face turned gray and he wet his dry lips. "Okay, Mr. Stonham. I'll do my best."

He hurried toward the engine. This time his step was brisk and springy. In a moment he had pulled himself into the deckless cab.

First his roving glance went to the lubricator. He noted that even in the present emergency the roundhouse crew had scrupulously held to the official allowance of valve oil. Then he set the feeds quickly.

The conductor came running up with orders. In no time at all they were off—a seventy-four mile run ahead of them, seventeen miles of it up a four per cent grade.

The 406 had a full tire, giving her a forty-inch wheel. Every bolt and nut was tight, her valves were square as a die. At top speed the little mill could do around forty-five miles an hour. Harry had her making that speed before he had gone two hundred yards. His lubricator was working, feeding blobs of oil to working cylinders and valves every five seconds.

BACK in the B-8, a mighty worried general manager was pacing the floor. His car rocked and shimmied from the excessive speed. It careened with screaming flanges around sharp curves. The needle on the speed indicator pointed steadily to 45.

Mr. Stonham turned to the conductor, who had come into the business end of the car. "Is this the best speed we can make?" he barked, pointing to the indicator.

"Forty-five," was the reply. "Why, yes, sure it is. I knew we were running like a streak, Mr. Stonham, but not that fast. It's lucky that Dobbet and the 406 are pulling us today."

Eight miles out of Gilson their pace slackened, dropped to thirty, then to twenty-five.

Mr. Stonham stood glaring at the speed indicator as though it were guilty. Now each labored exhaust of the engine could be felt through the entire length of the train.

"What's the matter?" he asked.

"Can't figure it out," said the conductor. "The grade along here is the same. Harry must be having a little trouble."

Harry *was* having trouble. His lubricator was dry. The valves were squealing and the reverse lever was clanking so viciously it seemed the latch must be torn out of the quadrant.

Now he was on his feet, peering ahead, hand on the throttle. Two miles to Parlin! Two miles to his precious cache of valve oil.

The 406 was doing less than fifteen miles an hour when he rattled over the lower passing track switch at Parlin. He halted her opposite a tie pile.

Meanwhile Mr. Stonham had lost no time. He rushed from the car and was beside the old fellow as he dropped from the gangway and hurried toward the cache.

"What's wrong?" demanded the official.

"Lubricator's d r y," Harry answered. "I got five gallons of valve oil hidden away here. It's some I *stole* from th' company," he added acidly. "Won't take a minute to get it an' fill my lubricator."

Mr. Stonham winced, but said nothing.

The little engineer led the way to a tie pile, stooped and came out with his can. Mr. Stonham helped him carry the container to the engine, and then boosted it up to Harry, who tilted it above the lubricator. A full two quarts ran over the side and dribbled molasses-like on the cab floor. Filled, the plug tightened, Harry turned on the steam.

THE narrow-gage boys still talk about that run. They have good reason to talk about it. That run did things for every eagle-eye on the N.G.&W. and for the whole town of Cleora.

Harry put his two-car train up Old Baldy Pass, around those twenty-five degree curves and with the grade against him, at better than twenty-five miles an hour! When he descended the long four per cent grade it was like a bucket dropping down a well. Ask the flat-country hoggers what kind of job it is to handle trains down four per cent grades. If they're honest they'll admit it's plenty ticklish.

The seventy-four mile run was made in three hours flat. Not so fast, huh? To appreciate it a man would have had to be riding the cab with him.

Two or three bank employees were waiting for the special at the depot in Cleora. Almost before it ground to a stop the money was unloaded from the B-8, and on its way up the street.

Harry reluctantly crawled down from the cab, a stooped figure once more. Well, the run was behind him now. When he looked up the street, he noticed a crowd milling around the entrance to the bank. The people seemed to be shouting angrily and gesticulating. He hurried toward them.

A block from the depot he was met by Jim Beasly, the master mechanic of the N.G.&W. "H'lo, Harry, where yuh goin'?"

"Kinda headin' toward the bank," replied the hogger. "Hear they had a run on it."

Beasly laughed. "They sure *did* have a run on it, but a minute ago they shoveled more money into th' window than we ever seen. Reckon if they got that much in th' bank it's plumb safe."

Harry nodded joyfully and turned back to his engine. When he reached her he found Mr. Stonham waiting there. The G.M.'s face was wreathed in a grin. He clapped the engineer on the shoulder.

"Harry," he said warmly, "we all want to thank you for what you've done today. You're one fine engineer —and too good a man for us to lose!"

The general manager started to turn away, but changed his mind.

"I'm issuing a new bulletin immediately that from now on all engines will leave the roundhouses with full tallowpots. The things you told me in Gilson last night might be just what's wrong with our railroad."

Who Recalls This Bad Spill in New England Many Years Ago? A. S. Pennoyer, of N. Y. City, Who Loaned Us the Old Print, Does Not Have Particulars. Maybe Some Readers Can Help Us Out

On *the* Spot

A LETTER, postmarked Brooten, Minn., says: "Please send me Feb. '34 issue. I lost my copy and valued it highly." But the writer failed to sign his name! Also, he failed to put his name and address in the upper left corner of his envelope, as postal regulations require.

Many of the letters we get are carelessly written and hard to decipher. Please write plainly. Ink is O.K. Don't use hard pencils or faded typewriter ribbons unless you want us to go blind from eye-strain. Best of all are bold typewritten letters that leave a blank line between each typed line.

Keep 'em short! Every month we get twenty times as much "Spot" stuff as we can print. Many letters are crowded out.

Some fans ask us to publish RAILROAD STORIES on a better grade of paper. Good idea, but—we can't afford to do it without raising the price. So long as millions of railroad men are out of work all over the world, this is no time to boost prices.

* * *

AMONG the high spots in our December consist will be: "Southwest Passage," historical novelette by E. S. Dellinger, dealing with early days of the old Santa Fe.

"On Company Time," by Earle Davis; a yarn about roundhouse workers (and sleepers) on the night trick.

"Evergreen Drag," a Christmas story by

The Engine Picture Kid, in the series based upon actual, living persons in their own home towns.

"Death Valley Days," by Ralph A. Snyder, the boomer-author of "Auld Lang Syne."

"The 13-Car Train Wreck of Friday the 13th," illustrated feature article by H. R. Edwards, in the series of famous old-time disasters. Front-cover painting by Emmett Watson will show this wreck, in which the inventor of the sleeping-car was burned to death inside one of his own cars, near New York City in 1882.

"A Century of German Railroading," historical feature by E. J. Baker.

"Free Gasoline," true tale by "Cupid" Childs, the popular N.P. conductor.

Last but not least, "Hump-Backed Hogs," the first of a series of articles about types that made motive-power history, by Arthur Curran, who used to write for the old "Railroad Man's Magazine."

* * *

WHEN you send us a Reader's Choice Coupon (page 143) or a letter or card containing that information, you guide us in selecting future material for the magazine. Here is the popularity list for Sept. issue, based upon votes received so far. This list is not final. Votes are still coming in.

1—"Hog Law," Dellinger
2—"The Spotter," Packard
3—By the Light of the Lantern
4—On the Spot
5—"Narrow-Gage Roads," Moody
6—True Tales of the Rails
7—"Lindy Hop," E. P. Kid
8—"Trackwalker's Tale," Martin
9—International Engine Picture Club
10—"Auld Lang Syne," Snyder
11—Rock Island Locomotives
12—Model Railroading

When the C. & A. Was Young

"OLD TIMES ON THE C. & A.," by James Deegan (Sept. issue), was like a letter from home to me. I worked for the Alton for years up to July, 1894—year of the big strike conducted by Gene Debs and the American Ry. Union.

About this time or a little earlier Willis Gray came to the Alton as general supt. out of Bloomington, Ill. He was off the old Jimmy Blair K.C.O.&S. line, running out of Kansas City, Mo., and now part of the Frisco System. Gray had the reputation of eating 'em alive on the Jimmy Blair streak o' rust. He took several of the K.C.O.&S. engineers and conductors to the Alton for the passenger runs, though one of them made a cornfield meet with a passenger train out of St. Louis when he got on her time.

Deegan's story about Frenchy praying on the cab deck reads like old Chalkey Foote who pulled the Hummer on the Alton between Slater and Kansas City about 40 years ago. Old Chalkey had a little McQueen 8-wheeler that was overpowered for her weight and as slippery as a greased pig. Chalkey was not so strong for praying when talking to a dancing queen, but he had a trick of turning the engine over to the fireboy. Then, grabbing a soft hammer, he'd go out and straddle the boiler and pound hell out of the sandpipes. No wonder the natives used to think he was crazy.

He was engineer on the Alton Limited when the Jesse James gang held it up at Blue Cut, east of Independence, Mo., early in the '80's. Men who later fired for Chalkey never could get him to talk about it. Folks said that no one who ever came in contact with the James boys would talk about them. They were well known around Independence after the war. I often saw Frank James after Gov. Critenden pardoned him. I also saw Jesse, once when I was small, but his name had no significance to me until years after, when my father told me who he was.

The Alton at that time had an old dining car, "The Palace," rebuilt from an old Woodruff sleeping car. She was so light when they first turned her out of the shops that they couldn't keep the dishes on the tables. Dishes danced around on the floor or hop out the car windows, so she had to be reshopped. They tore up the floor and put a double layer of steel rails on the floor deck. Then they used her as an anchor on the tail end of the Hummer.

Coming west to Kansas City one morning Chalkey was a little late, and when running late all curves looked alike to the old fellow. As he stopped at Union Depot the head cook came up to the engine.

"Mr. Chalkey," he blurted out, "when you all done hit that reverse curve coming down Independence Hill you all done moved my kitchen range four inches out of place and you done bounced a whole pot of noodle soup outa de car window."

"Is that so, George?" Chalkey says sympathetic like. "When we go back tonight I'll put that range back in place for you, but I'm afraid it will be too dark to find that pot of soup."

Your September cover got my eye. I've grabbed train orders from several lady ops in days gone by. I was told the hoop was introduced by one clever young woman who was tired of having her hand grabbed in a greasy glove, so she stuck her orders on a wooden hoop and handed it up to the tallowpot, nails and all. He was lucky she didn't tie them to the stove poker and heave it through the cab window.

We had another lady op who just wouldn't come near a moving engine, so you had to be a gentleman and slow down or stop when you did business at her office. She finally hit on the brilliant idea of tying train order to a track bolt and then heaving them at any engineer who wouldn't stop.—"HIGH BALL" JOHN J. BURNS, 235 N. Granate St., Prescott, Ariz.

Upper Photo by Paul Stringham, 303 Lydia Ave., Peoria, Ill.; Lower Photo by R. Foster, P. O. Box 375, East St. Louis, Ill.

On the Illinois Terminal R.R. (Upper) 2-Car Multiple-Unit Train; Originally Built for the Chicago, Ottawa & Peoria, Taken Over by the Chi. & Ill. Valley and Then Sold to the I. T. (Lower) Engine No. 1, a Baldwin 4-4-0 Type

The Information Booth

WHO can give details on Southern Ry. wreck near Brunswick, Ga., Dec. 25 or 26, 1926? It was a collision of the "Royal Palm" and "Ponce de Leon," in which several passengers died.—L. JAMES, 421 15th St., Columbus, Ga.

* * *

WAS a traction line ever operated between Washington and Quantico, Va.? If so, give details.—P. F. C. WALLACE W. SMITH, 9930 S. Winchester Ave., Chicago.

* * *

I WANT dope on B.&O. wreck near Terra Cotta, D. C., about 30 years ago. A relative of mine was killed in it.—JAMES FITZGERALD, 1618 Trinidad Ave., N.E., Washington, D. C.

* * *

WHO knows number and type of P.R.R. engine that did 3 miles in 85 seconds, at rate of 127.3 m.p.h. near Ada, O., in 1905?—T. B. RUSSELL, dispr. Mo.P., De Quincy, La.

* * *

IS information available about trolleys formerly (perhaps now) operated in Western Mass., particularly between North Adams and Pittsfield?—R. WONSON, 263 Belmont, Fall River, Mass.

WHO can tell me about the wreck of a circus train on Montreal Hill Line 10 or 12 years ago?—ALBERT DE CHAMPLAIN, 82-A Queen St., W. Ottawa, Canada.

* * *

DELLINGER'S "Hog Law" (Sept. issue) describes the engineer switching on the electric headlight, apparently in 1904. The only headlights I can remember at that time were operated by oil. Dad had to light his headlight 7 times while running a Northern Pacific engine through a sandstorm for 64 miles in Washington.

Can any reader tell me if the narrow gage between Mina and Sodaville, Nev. (an S.P. line), is still in operation?—CORP. A. G. WILSON, 303 E. 11th St., Junction City, Kan.

* * *

YEARS ago Michigan University issued a list of fiction dealing with railroads. Since then no other such list has been compiled. Your magazine, with the aid of readers, should make up a complete list of railroad fiction, stating the type of each story, background, etc. I have about 200 such volumes and would gladly send you a catalog of them For example, Hamblen's "The General Manager's Story" is one of the best accounts of

old-time railroading I know. How many readers ever heard of this book?—FRANK DONOVAN, JR., 3928 Livingston St., Washington, D. C.

(EDITOR'S NOTE: *Thanks, Mr. Donovan. Send us your list and we'll print it. We'd like to hear from other readers on this subject.)*

* * *

WHERE can I get a collection of railroad songs with music?—C. A. BUSHNELL, 4728 Princeton Ave., Tacony, Philadelphia, Pa.

(EDITOR'S NOTE: *Carl Sandburg's "American Song Bag" contains a few railroad songs. Inquire at any big library or book store.)*

* * *

JULY issue contained a request for dope on a wreck about the turn of the century. Perhaps it was one I saw when a youngster. In about 1906 or 1907, at Belmar, N. J., I was roused after midnight by a fearful crash, followed by ringing of the fire-bell. I jumped out of bed and ran to the station, a block away. There had been a collision between Pennsy and C.R.R.ofN.J. passenger trains, both made up of wooden cars. Several persons were killed and many injured.—WM. J. BRENNAN (ex-conductor, L.I.R.R.), King's Park, L. I., N. Y.

* * *

LANCASTER Ry. & Loco. Historical Society, of which I am a member, has obtained quarters in Pennsy station at Lancaster, Pa., and will hold all meetings there.—RICHARD STEINMETZ, R.R. Editor, *Sunday Courier*, Harrisburg, Pa.

* * *

SEPT. issue said the first electric trolley car on this continent ran in Windsor, Canada, in 1886. An electric car was operated by storage batteries long before that—at Brandon, Vt., in 1835. The first electric trolley car on this continent was propelled by a system devised by Charles Van Depoele, a young Belgian engineer, over the line of the Capital St. Ry. Co., Montgomery, Ala., April 7, 1885. I have a photo of this line.—ROBERT L. BANKS, 16 W. 77th St., N. Y. City.

* * *

RECORDS of American Transit Asso. prove that the first electric trolley car operated in N. America was in Baltimore, Md., by Baltimore Union Passenger Co., Aug. 10, 1885. Baltimore *Sun* last Aug. 4 ran a feature article about the 50th anniversary.—RAYMOND TOMPKINS, Exec. Ass't, Baltimore Transit Co.

* * *

INFORMATION on a subject important to the future of railroading may be found in "Diesel Hand Book" and "Diesel Operating Guide," $5 apiece, published by Diesel Engineering Inst., 443 Hoboken Ave., Jersey City, N. J. Each book has 544 pages with hundreds of illustrations.

* * *

AUDISK CORP., an electrical transcription company of which I am president, is producing what I believe is the first authentic railroad serial for the radio. The story, "The Green Valley Line," was written by Col. Rhys Davies, who spent years as operator on the C.P.R. One lead is played by George Mortimer, for many years a boomer engineer.—GILBERT KNEISS, 18 Forest Lane, Berkeley, Calif.

SEEING a true tale about standardization of N.&W. gage in 1886 (July issue) reminds me that in April, 1875, I began work as passenger brakeman on that road, then known as the Atlantic & Mississippi.

The Ohio, Virginia and Tennessee division extended from Lynchburg, Va., to Bristol, Tenn., 204 miles. Track was laid with U rails only about 15 feet long. Joints were laid in chairs. It was tough for trackmen to keep track up so trains could get over it at all. On one trip we got on the ground three times; twice on a siding and once between stations.

About 1876 the work of replacing U rails with T models was begun. Motive power was all 4-4-0's, wood-burners, mostly Masons. It was some job to pick a tender full of wood out of the snow and sleet every 25 to 50 miles. That was the work of 3 brakies, who had to stand on platforms to handle brakes on long hills.

Railroading 61 years ago was a rough and tumble job. Conductors hired their own brakemen; usually white men for passenger, Negroes for freight service. Wages for white brakemen were $1 a day straight. Colored brakemen got the same rate, but only while on duty, which meant about $20 a month.—W. S. BURK, 302 Summit Ave., Lawton, Okla.

* * *

ANSWERING Mr. Kee's inquiry (Sept. issue) regarding colored engineers or conductors: Henry Vanness was a Negro passenger conductor on a New Haven branch. He railroaded about 45 years; was pensioned about 1916, and died 6 years ago.—MARTIN FALTER, Vernon, Conn.

* * *

A NEGRO named David Moore ran a switch engine in Grand Rapids, Mich., for the old L.S.&M.S. I often rode on the engine with him when I was a kid. He was a fine fellow but seldom was allowed on the road. Once in a while if some engine on the road broke down, they would send Dave out to bring it in. Everyone knew when he was coming, for he whistled almost continuously, and ran that old engine as fast as she could turn a wheel. When I left in 1902 he was still there.—ERNEST MCKENNEY, 3583 Fawcett Ave., Tacoma, Wash.

* * *

BOSTON & ALBANY R.R. has a colored yard conductor, Chas. Morris, in charge of a white crew at Hudson, N. Y. He is capable and well liked. When I first knew him, Charlie was rear brakeman on local freight running between Hudson and Chatham, N. Y., under Conductor Geo. Cunningham and later Conductor Thos. Logan.

I remember his father, too: Thos. Morris, also a Negro. At the time my father hired out as brakeman at Hudson in 1873, Thos. Morris was yardmaster there, in charge of 4 or 5 switch crews and about 18 road crews, all white men.—LINCOLN H. STUDLEY, 233 First St., Pittsfield, Mass.

IN connection with the Whyte Classification system (Sept. issue), statement was made that the first 4-8-0 was the "Champion," built in 1880 for the Lehigh Valley. Actually, the first locomotive with this wheel arrangement was built by Ross Winans, of Baltimore, in 1856, and named "Centipede." Cab was on the front bumper. She was purchased by the B.&O. in 1863.

The "Champion" was built in the L.V. shops at Weatherly, Pa., from designs by Philip Hofecker, master mechanic. He built a number of other engines of this type, known as "12-wheelers." Various roads adopted the 4-8-0 type for heavy freight service, although she never attained the popularity of the Consolidation (2-8-0) type. In Schenectady Locomotive Works catalog of 1897 the 4-8-0 is called the "Mastodon" or 12-wheel type. Brooks Locomotive Works catalog of 1899 uses the term "12-wheeled freight."—PAUL T. WARNER, former editor *Baldwin Locomotives*, 6832 Wayne Ave., Mt. Airy, Phila., Pa.

* * *

A SIGNAL TOWER man at Lawrence, Mass., seeing 2 men spread-eagled on the roof of the motor car on the "Flying Yankee," the B.&M. streamlined Boston-Portland flyer, telephoned ahead to the next stop, Bretton, N. H. A reception committee of railroad police helped the 2 down on arrival, and they certainly needed help. They had nothing to hang on by except the engine vents, which were very hot, rising about a foot above the roof, on a ride of 62 miles at 80 m.p.h. They will not stow away on any more streamlined cars. Once is plenty, thank you.—OTIS BARTLETT, 85 Maple St., Berlin, N. H.

* * *

APROPOS of steam railroads on islands, the Aug., '35, *B.&O. Magazine* contains an illustrated article on the 8-mile narrow-gage road which was located on Nantucket Island, 30 miles off the Mass. coast. This road was built in 1881 and abandoned in 1917. Its first locomotive was the "Dionis" (named after wife of first Nantucket settler): a 4-4-2 Atlantic type with leading truck, big cowcatcher and headlight and high smokestack. Frank Leizl, who fired the "Dionis," is now a gardener employed by the author of this article, H. A. Willard II (kin to the B.&O. president).

* * *

COMMUNICATIONS in Sept. issue dealing with Fulton County Narrow Gage Ry., from readers, contained inaccuracies. I'll send a complete history of this road to any reader who encloses stamped, self-addressed envelope.—L. P. GILLUM, 519 Claremont Ave., West Chicago, Ill.

(EDITOR'S NOTE: *Evidently Mr. Gillum doesn't know what he is letting himself in for. He may get 1,000 requests, which would take him a solid month to fill, working day and night. You see, his history is typed by hand. So don't be surprised, fans, if he fails to answer you.)*

Boneyards and Abandonments

IN Aug. issue was a request for information about boneyards. The one here is filled with locomotives and rolling stock that will never roll again. Three engines, No. 341 (4-4-0) and Nos. 1816 and 1826 (2-8-0's) were scrapped recently. The rest are Intercolonial 2-8-0's and 4-6-0's.—MENDEL GREENBLATT, 307 Lutz St., Moncton, N. B., Canada.

* * *

SPEAKING of loco graveyards, the C.&N.W. has one at Butler, Wis., tenanted by a large roundhouse, 15 engines and several hundred freight cars; also the remains of an abandoned hotel.—DAN BERRONY, Milwaukee, Wis.

* * *

LOCOMOTIVE No. 1203, last of the Mallet compounds tried out by the Me.C., New Haven and B.&M., has been dismantled here.—BERT JEWETT, JR., 119 College Ave., Waterville, Me.

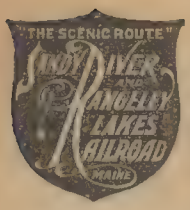
* * *

IN Aug. issue Wayne Priwer said cut-throat truck and bus competition was ruining interurban lines. The former secretary-treasurer of an old interurban told me the main reason for receiverships and dissolution of the largest electric systems in Indiana and Ohio was almost incredible over-capitalization and continued use of obsolete equipment. For instance, in 1923 Union Traction Co., of Indiana, paid 24% of gross income as interest on borrowed money!—JAMES COOK, 525 W. 4th St., Anderson, Ind.

Photo by J. Cooley, 74 Norfolk, Dorchester, Mass.

Graveyard of Iron Horses on the New Haven at Readville, Mass. Some Are Rust-Eaten Old 4-4-0's

Farewell, Sandy River Line!



WHO wants a real bargain in Sandy River locomotives? Between $300 and $400 will buy a 2-ft.-gage Baldwin in running order. This is scrap price. Coaches and cabooses in good condition can be bought for about $50 each. The world's only 2-ft.-gage parlor car is being held for $100; individual swinging plush seats, mahogany trim, plate-glass, mirrors, hot-water heat, etc. It seems a shame that all this rolling stock should be used for scrap! One engine already has been cut up.

In hope of saving the S.R.&R.L. I canvassed the territory asking for loans totaling $25,000, for which I understand the junkmen would sell the whole works. I found keen popular interest in the proposition of reviving this road, but the people didn't know me well enough to advance money. Meanwhile, the Public Utilities Commission has blocked the junkmen temporarily, until they find out why railroad service was discontinued abruptly, without permission from either the P.U.C. or the I.C.C.

Several "picture fiends" rode the last train on the Sandy River & Rangeley Lakes Railroad. June 29 had been fixed for the final day of operation, but 2 days had been needed for hauling equipment into Phillips to be scrapped. On July 1, little old 24 rattled into town dragging 40 cars, cleaning out Carrabassett and Kingfield yards, including 2 snowplows, 2 diggers, a caboose, a coach and the only 2-foot-gage parlor car in the world.

Engineer Dan Aldrich, Fireman Ed West, Brakeman Norman Dustin, and Conductor Clarence Fairbanks made up the crew on the last trip, July 2. Conductor Bob McMullen had gone to Kingfield to bring in the Reo rail car. Several station agents were still on duty attending to express. The new owners had ordered the road closed without bothering with such things as permission from the I.C.C. or the State Public Utilities Commission, so things were somewhat tangled. The road had done a pretty good business in its last few months.

We high-tailed to Farmington with only the combination car. There we tied on to 14 box cars. At Strong we picked up 6 pulpwood racks. Of the dozen men gathered around the engine at Farmington most had rounded out close to half a century of seniority. Their aggregate service with the road was a bit over 300 years.

As we rumbled along the winding curves and sharp grades folks came out of their houses to wave their hands at the little train. At one typical New England farmhouse 3 or 4 young men with a team hitched to a hayrack stopped to watch us, while women on the piazza waved their aprons. In the kitchen window an old man in a chair lifted a gnarled hand.

"They've watched every train for the last fifty years," said Fairbanks. "They always wave."

A small group had gathered at Phillips to see the last arrival. Several old trainmen helped with the switching. One man put his 6-year-old son on the engine for a ride.—LINWOOD W. MOODY, Box 144, Union, Me.

* * *

BILL of sale for the S.R.&R.L. line has not been approved by the court. Citizens of Franklin County, Maine, are seeking capital and public support to keep the pike running. It's up to the court to give or withhold the death sentence.

I was interested in Mr. Moody's article (Sept. issue) because Dan Cushman, a relative of my father's, ran the first train into Kingfield. I have ridden this line, Strong to Kingfield, and it takes the cake for crookedness.

Once a string of 6 cars got loose at Carrabassett. There are 11 miles down grade to Kingfield. A section gang a few miles down the hill saw the runaway coming and threw ties and logs on the track. When that string of cars hit the obstruction at 70 m.p.h. there were some fireworks, but no one was hurt.—HARRY MITCHELL, JR., 1525 Dauphin St., Wyomissing, Pa.

* * *

SANDY RIVER LINE is gone forever, unless the people of Maine buy it from the present owners. But I don't think they will. The owners have already started cutting up the motive power for junk.

Linwood W. Moody and I went to Phillips on July 2 for the last trip. About 7 A.M. the crew backed No. 24 onto the combination car and got ready to leave town. We obtained permission to ride the engine. Those little cabs weren't built for 3 men, but by sitting edgewise and sucking in my breath we made out. The engine crew, Dan Aldrich and Ed West, showed us scenes of interest, including places where unusually large game had been shot by former railroaders and where trains had tipped over.

At Strong the engine was coaled, the whole crew working until the tank had enough fuel for the entire trip. We stopped at a famous spring beside the track for a drink of the best water I ever tasted. Then I went back to see how a 2-foot gage car rode. She rolled along as smoothly as any crack train. The track was in excellent condition; not a low joint on the line.

Arriving at Farmington, I returned to the engine for the run back to Phillips. With 20 cars the little engine rode much steadier than with only the combination. At Phillips we watched No. 24 shunt cars until every track in the yard was full and oozing out at both ends. Then came the saddest part of all, when No. 24 was backed into the roundhouse for the last time!—H. T. CRITTENDEN, 909 E. 26th St., Norfolk, Va.

(NOTE FROM FREEMAN H. HUBBARD, EDITOR: *Passing of the Sandy River Line recalls my honeymoon, some years ago. My bride and I were the only passengers on a rail-car driven by Hogger Ed West in a night run from Farmington to Rangeley. Ed told us the road's early history and gave us a drink from the spring Mr. Crittenden mentions.)*

CATERPILLARS BY THE MILLION -
FOR A TRAIN TO BE STOPPED BY LOCUSTS IS NOT UNCOMMON IN SOUTH AFRICA, BUT ONCE, IN UGANDA, A TRAIN GOING UP AN INCLINE WAS BROUGHT TO A STANDSTILL BY A PROCESSION OF MILLIONS OF CATERPILLARS CROSSING THE LINE. THEIR CRUSHED BODIES MADE THE RAILS SO SLIPPERY THAT THE WHEELS WOULD NOT GRIP. TRAINS ARE SOMETIMES STOPPED IN ALGERIA, IN THE SAME WAY BY MILLIONS OF CRAWLING CRICKETS.
THEY DIDN'T APPROVE OF TRAINS -
IN KENYA, A RHINO CHARGED A TRAIN, SMASHING THE FOOTBOARD, AND THEN GALLOPED OFF, (PROBABLY WITH A BAD HEADACHE). ANOTHER ONE, LATER, DID NOT COME OFF SO WELL, FOR THE TRAIN KILLED HIM.
AN UNWELCOME PASSENGER -
WHEN A TRAIN ARRIVED AT A STATION IN THE MALAY STATES A 12 FT. SNAKE WAS FOUND FESTOONED ON THE FRONT OF THE ENGINE.
BEES STOP ROYAL TRAIN -
ONCE, WHEN THE ROYAL TRAIN WAS TAKING QUEEN VICTORIA TO BALMORAL, THE DRIVER FOUND THAT A 'DISTANT' SIGNAL WAS NOT VISIBLE. STOPPING THE TRAIN AND WALKING UP THE LINE, HE FOUND BEES HAD SWARMED ROUND THE LIGHT, TOTALLY OBSCURING IT.
MADE A MEAL OF THE SLEEPERS -
WHITE ANTS LOVE WOOD. ONCE, 75,000 SLEEPERS WERE EATEN BY THEM ON THE KARACHI LINE, INDIA.
THE MISSING RAILS -
IN THE EARLY DAYS OF THE RAILWAY FROM FRENCH SOMALILAND TO ADDIS ABEBA, ABYSSINIA, THE NATIVES USED TO PULL UP THE LINES AT NIGHT TO FORGE SPEAR BLADES FROM THEM. THEY ALSO CUT OFF LENGTHS OF TELEGRAPH WIRE, TO MAKE COPPER BANGLES.
A GIFT FROM FATHER NEPTUNE -
IN 1931, WHEN THE RIVIERA EXPRESS TO ST. REMO WAS RUNNING ALONGSIDE THE SEA, THE ENGINE WAS STRUCK AND DAMAGED BY A HUGE WAVE. WHEN THE WATER HAD DRAINED AWAY, A 5 LB. FISH WAS FOUND FLAPPING IN THE CAB OF THE ENGINE.
Hellier

Oddities of Foreign Railroading, from the Scrapbook of Mr. LeFleming, Who Writes: "I Can Vouch for the Truth of All These Scenes Except the Last, and I Even Recall Getting a Live 2½-Foot Eel in the Tender of a Loco in England. The View of Abyssinia (Officially Called Ethiopia—See Page 56) Is Not Quite Correct. Rails Were Attached With a Steel Wedge Shaped Somewhat Like a Spearhead; Hence the Attraction for the Natives"

Our Neighbors Across the Sea

COMPILING locomotive rosters and keeping them up to date is a popular hobby of England. At least 3 periodicals there give monthly information on the subject, which is one of the chief activities of the Stephenson Locomotive Society. A friend of mine has taken more than 10,000 engine photos in his spare time.

The Federated Malay States Railway is metre gage, about 1,100 miles long. It has some 200 locomotives, mostly 4-6-2, with a standard wheel diameter of 54 inches, hauling both freight and passenger trains. Maximum speed, 45 m.p.h. The first section was opened in 1885, so this is our jubilee year.

We have had 4 classes built by Baldwin—4-6-2, Class Q; 0-6-0T, Class R; 2-6-0, Class M, and 0-6-6-0, Mallet. The Mallets were built for Russia. Two were taken over by us, promenade deck and all, the latter being railed to save crews from slipping off icy platforms. Natural ice is unknown in our country. Class M were mainly used in construction and are now laid up. Classes Q and R are all hard at work with minor alterations and having our standard fittings such as safety valves, injectors, vacuum brakes, etc.

Our most powerful locomotives are Class S, 17x24, 3 cylinders, 4-6-4, 29,477 lbs. t.f. The last 5, built in 1931, have rotary cam poppet valves. Five Class S engines have rolled up an average monthly mileage of 10,450.

Migrating herds of wild elephants do much damage to the railway, even though it is protected by elephant trenches. Young elephants break the banks to make passages for the bigger brutes, who force their heads and trunks through openings in the buildings and hurl out pots and pans, searching for salt. They uproot young trees and eat the roots, and scratch their backs on the eaves, bringing down large sections of roof with a good heave. After this they hang around sleeping it off, leaning against buildings and trees. The place then looks as if a hurricane had passed over.

Occasionally bull elephants take a smack at a train and usually get killed. One such pachyderm got this epitaph beside the track: "Here lies the remains of an elephant which, in defense of his herd, charged and derailed a train on the F.M. S.R."—H. M. LeFleming, Sentul, Kuala Lumpur, Federated Malay States.

* * *

I DIDN'T know there were so many varieties of streamlined trains until enlightened by Jim Holden's article in March Railroad Stories. But he did not mention streamlined trains of France—Bugatti, Renault, Michelin. Article "Rail Out, No Flag," tells about a man on Grand Trunk locomotive who runs into a Wabash engine. Do both lines use same tracks?—F. H. E. King, care of State Forest Service, Nelson, New Zealand.

(Editor's note: *Yes, for many miles.)*

The Reader's Viewpoint

WHY do crabs object to railroad fiction based on the kind of heroism that happens in real life? If the following true incident were embodied in a fiction story, some readers wouldn't believe it: About 12 years ago a transient worker named Tom Whitney, riding the rods on a G. N. train, was dumped off when the train ran into a washout on the Jefferson River near Sparrington, Mont. He found Fireman Wm. Kayser and Brakeman Martin Johnson trapped in the engine cab in danger of suffocation. With bare hands Whitney dug into mud and water until his fingers were raw and bleeding, and pulled out the two men, for which railroad officials gave him a new suit and transportation to Chicago.—Mrs. E. Dommett, Kamloops, B. C., Canada.

* * *

I NEVER miss an issue of Railroad Stories. About 90 per cent of North America's railroad employees belong to rail labor organizations, and I represent some 1,800 Illinois Central members of the Order of Railroad Telegraphers, being general chairman of the Y. & N. V. Lines.—R. K. Smith, Drew, Miss.

* * *

ONE would gather from your stories that the only employees on railroads are train and engine men. Due to increased speeds, heavy engines and reduced maintenance costs, trackmen have hard and responsible jobs. Give credit to the lowly "gandy dancer" whose work is the foundation of all railroad operation.—S. M. Rodgers, Ass't Supervisor, P. R. R., Buffalo, N. Y.

* * *

GIVE us more fact articles, less wild fiction. Best of all are the Engine Picture Kid stories.—James Johnson, 71 Hillcrest Ave., Trenton, N. J.

WHENEVER I pause to review working conditions in the earlier days of railroading before Gene Debs and the rest of the boys got busy organizing the Brotherhoods, I lose a big percentage of my sympathy for the wails of distress being sent up by the big shots over the business condition of the railroads today.

Labor didn't get fair play until they fought like hell for it, as "Hog Law" so admirably illustrates. It took the Brotherhoods to lead the way and show what could be done in achieving decent wages, reasonable hours and working conditions.—John A. Thompson (author of The Engine Picture Kid stories), Gilsum, N. H.

* * *

"HOG LAW," by Dellinger, was the best thing in Sept. issue. I remember when the law was passed and when it went into effect. It was a boon to telegraph operators, as it put 3 men where there were 2.

Right there is where the Brotherhood should have ceased their demands. Now they have about killed the goose that laid the golden egg. Considering the high cost of train operation. the burden on taxable property and the great decline in revenue, it is a wonder the railroads are able to turn a wheel.—B. M. M., Shreveport, La.

* * *

We sold out Sept. issue the day it was received. I know personally of several people who have "taken on" railroading and its problems as a result of the enjoyment of your pages.—Wm. Semsrott (Scruggs-Vandervoort-Barney Dry Goods Co.,) St. Louis, Mo.

* * *

WHO wouldn't get a kick out of Snyder's "Auld Lang Syne" (Sept. issue)? The Engine Picture Kid is pretty hot most of the time, but he slumped a bit in "The Lindy Hop." Why not devote an entire issue to roasting the motion-picture men? "Silver Streak" left a bad taste in my mouth.—Corwin Robbie, Hq. Btry., 3d F. A. Brigade, Fort Lewis, Wash.

Old-Timers Heard From

HERE'S a boomer back to life after an absence of 20 years. I've worked on more roads than Roosevelt has alphabetical bureaus. Remember when Oil City gave you a pie-book before they handed out a lantern and key? When Albion, Pa., was always good for a job in the spring? And when the Little Giant in Hazelton yards was good for a job flat-footing?

Remember how we used to jockey on the hump at Renova, Pa.? And when Boomer Mike Reardon left the North for the South he was 3 weeks going down and 3 days coming back? How about the old Y.M.C.A. beanery at Gibson on the Hook-and-Eye? Don't forget Old Brewster on the Wheeling & Lake Erie, nor the poor old brakemaster and how he shoveled coal from Oil City to Olan, on the Pigtail Div.

Do you recall the easy riding on the old Cincy, Jack & Mack? Every boomer working at Newcastle Jct. wore corduroys, coat, pants, and vest (John Murphy's specials). And a boomer could always eat in La Junta, Colo., if he brought his chuck in with him.

'Member when Jeff Carr, the U. P. bull, rode a white horse through the Cheyenne, Wyo., yards? How about the hostile decaroos on the car ferries through the straits of Mackinaw? Where is old Barney O'Reilly who used to run the train from Saginaw to Ludington and down the Pere Marquette, Mt. Pleasant branch?

You A.E.F. boys ought to remember how we sashayed wagons around the yards at Bassens and St. Pierre de Corps after the Armistice. Where are Jimmie Creighton, Doc Daugherty, 3-C Carmody, Granny Boyle, "Take It Easy" Hogan, Railroad Red and L. H. S., our gallant trainmaster at Issodun? Let's hear from old-timers. —J. E. Brady, 17237 Wallen Ave., Chicago.

* * *

CHATSWORTH wreck article (June issue) stated: "At 11.45 they left Chatsworth, picking up speed. Three minutes later they went through the little prairie town of Piper City." That is incorrect. Piper City is the first stop beyond where the wreck occurred.

The author said Axel E. Applegreen was the last survivor. He probably meant last of the train crew. There are many surviving passengers, including Howard Fuller, then and now a reporter in Peoria, and myself. If Mr. Fuller and I are living on the 50th anniversary of that wreck, Aug. 10, 1937, we propose to write it up as we saw it.—Louis Rotterman, 301 W. McClure Ave., Peoria, Ill.

* * *

JUNE issue contained an editorial footnote explaining that "double number" meant 245 miles from one city and 26 miles to another. It never was that way on any of the railroads I worked for. My interpretation is that 245 is the miles from the point at which numbering begins, and 26 the number of telegraph poles from milepost 245.—Knuckle Pup, Hammond, Ind.

IN 1913 or 1914 I won a year's subscription to the Railroad Man's Magazine as a prize in a "telegrapher's fist" contest. I became so much addicted to it that I am now reading its successor, Railroad Stories. Can't you restore the original name of our good old magazine? I have been off the road since 1915, but used to be op and dispatcher on the A. C. L., Southern, Wabash, Burlington, etc.—P. S. Pender (electrical engineer), 1311-A 19th St., Granite City, Ill.

* * *

HERE'S another version of the origin of the term "hoghead" as applied to engineers. Roxie Reese, pulling passenger on the Gulf, Colorado & Santa Fe, ran into a drove of hogs near Pooleville, Texas. One hog's snout became wedged in the pilot, its body torn away. Seeing it, the master mechanic, G. B. Nichols, said to Roxie: "At last you've got a head that seems to have some brains in it." Roxie thereafter was known as "Hoghead," and the term gradually spread to other runners.—Paul A. Ramey, Pomona, Mo.

* * *

M. LAVELLE (Aug. issue) said Engineer Wm. J. McGroarty jumped from his engine when the train ran away on Ashley Mountain, on the C.R.R.ofN.J., Feb. 24, 1918.

That engineer was my uncle. As he told the story, 2 brakemen were in the cab when he realized that the train was out of control. "We're running away, boys!" Uncle Bill cried. "See what you can do with the hand brakes. I'll stick."

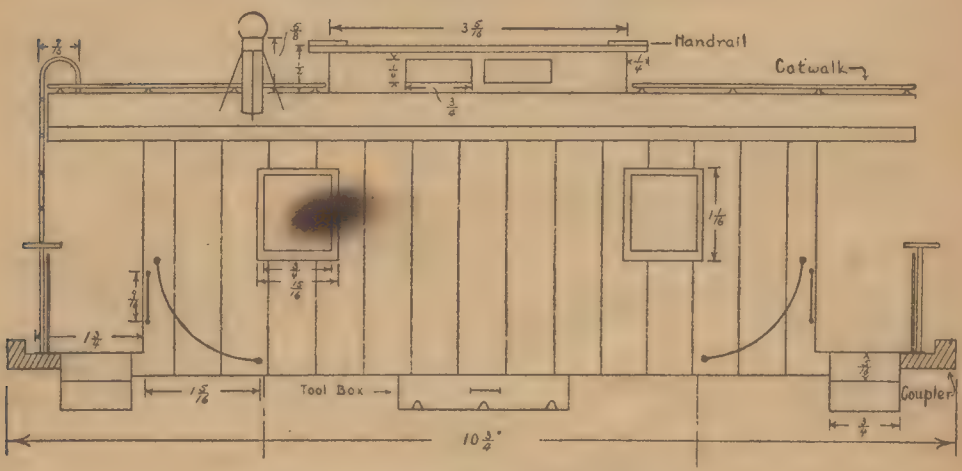
Daniel Mohan and Hector O'Connell, brakemen, and George Ichter, fireman, started back over the top. Ichter set the brake on the head car, then jumped when he realized that speed was increasing. He was picked up unconscious an hour later. Mohan was last seen alive 7 cars back. He was found dead in the wreckage of the caboose. O'Connell went back 12 cars. When he saw there was no hope of stopping the train, he lay down on the running board, gripping it with all his strength. His hold was with difficulty released by rescuers.

Uncle Bill stuck to his post because he wanted to prevent the runaway from striking the helper engine he expected to find on the main line, beyond a heavy curve. He held the whistle valve open roaring a warning, but there was no time for men to get out of the way. Four engines on the main line were smashed into one heap, on which the wreckage of 35 box cars with 1,500 tons of freight piled up.

Uncle Bill was thrown clear of his cab and was picked up unconscious with broken arm and suffering severely from shock. Seven other railroad men were injured.—C. J. McGroarty, 450 E. Northampton St., Wilkes-Barre, Pa.

Model Railroading

Conducted by Charles G. Cunningham



"The Little Red Caboose"

Over the hill at Libertyville
With a jangle of gearing loose,
Comes Forty-eight, the long way freight,
With the little red caboose.

NEXT to the locomotive, the most fascinating part of a railroad is the caboose, sometimes called the "crummy" or "buggy" or "doghouse," Here the conductor has an office and makes out his wheel reports. Here the trainmen sit in the cupola and keep their eyes glued to the long, swaying string of freight cars that snakes ahead of them, watching for "hot boxes," hoboes, disarranged loads, sticking brakes, and what have you.

Here the men sleep in bunks, cook and eat meals, keep a cheerful fire burning in the little coal-stove during cold weather, and read their latest copy of RAILROAD STORIES, swap yarns, and engage in friendly arguments on the long night runs.

Here are kept the flags and lanterns which the flagman uses to avert a rear-end collision whenever a stop is made. Here, too, are first-aid kits and tools for use in emergency.

Yes, "the little red caboose behind the train" is a dramatic slice of life. No wonder songs and stories are written about her. No wonder she occupies a place of honor in miniature railroad systems. No wonder you want her realistic.

Many readers are dissatisfied with tinplate equipment, and they write to us asking how to rebuild a crummy to make her look more like a scale model. This rebuilding job is not at all hard. And not expensive, either. If you have an old tinplate caboose, you'll be surprised how a little time and ingenuity improves her appearance. Can you get some empty coffee cans, soldering iron and about 50c. in cash? O. K., then let's make a real caboose.

REMOVE the trucks, roof proper, shields on ends of platforms, steps and brake wheels. We'll work from the roof down. Strip off the roof proper and anything else

you find there. Now, from the coffee tin cut a strip of metal 5/8" wide and 9 7/8" long. Bend it in the form of a rectangle with the two long sides 3 5/16" in length. Make the two ends of the strip meet at one corner. File the bottom concave to fit the curvature of the roof proper. By "concave" we mean file a half-circle into the tin on the ends of the rectangle.

On the ends 1/16" in from the edge, start the two small windows. When finished, they will be 3/8" wide and 5/16" high. There are two more on the opposite end. From the vertical center line on the sides of the tin strip, mark out the large windows. These start 1/16" in from the center line and are 3/4" long by 1/4" wide.

For the roof of this rectangle we need a flat piece of tin 3 13/16" long by 1 7/8" wide. Starting from each corner, punch holes into the tin 7/16" away from each corner along the edges of the tin. These are for the handrails. Insert small pieces of bell wire into them, forming the wire like the arms of a 90 degree triangle.

Catwalks are made of one strip of tin 6 1/4" long cut into two pieces, each 3 1/8" long. The strip by the way is 3/8" wide. Procuring the small spacers under the catwalk will be our first expense. Use 1/16" square brass cut into lengths of 3/8" long or buy a length of radio "bus wire." Whichever you do, the total expense for the spacers should not exceed 10c. The small spacers under the catwalk are 1" apart. The extension walk from the center catwalk to the ladder is a strip of tin 1 3/4" by 1/2". Bend down the end of this for 1/4" to make the stand where it meets the roof at the ladder.

Lionel Standard-Gage Caboose No. 517

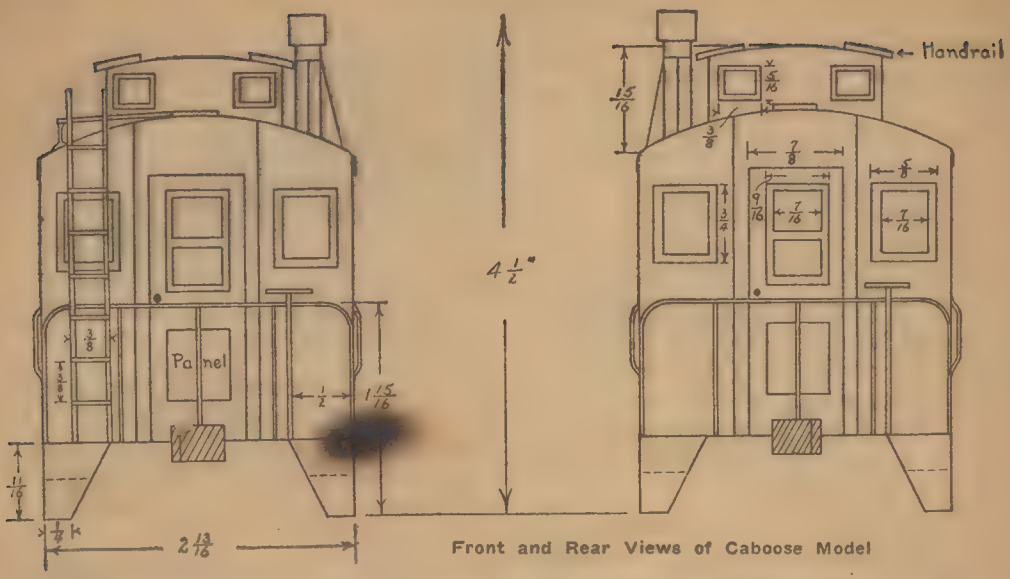
Tinplate Caboose Model in Process of Being Rebuilt by Fred Fuhr, of New York City

Now for the chimney. This would cost 5c. or less. You need a length of brass tube 1/4" diameter by 1" long. File one end on an angle to fit the curve of the roof proper and bend a small piece of tin 5/8" wide over the other end. Solder this to the roof and then attach four small guy wires from the chimney to the roof, spacing them with your eye. The chimney goes on the same end of the roof that you put the extension of the catwalk. Now solder the cupola onto the roof proper. This finishes your roof.

FOR clearness, let's say that No. 1 is the end of the caboose where the ladder is to go, and No. 2 is the other end. All further instructions, until noted, will deal with end No. 1.

About 1/16" in from the edge of the platform, scribe a line lengthwise. From the side where the ladder is going (on this line) punch a hole 1/16" in from the side. Then punch another hole 3/4" in from the same side, another 1 7/16", a fourth one 2 1/8" in, and a fifth hole 2 1/4" away from the same edge. This fifth one is for the brake wheel. The sixth and last is 1/16" in from the right side of the platform. All these holes are for the guard rails.

Now do the same thing on platform No. 2. Cut six pieces of bell wire 1 1/4" long. Stick these into the holes and solder. Cut two more lengths of wire 5" long. Place one end of a length of this wire in one of the holes which you punched 1/16" in from the side of the platform. Bend it as shown in the drawing and solder to the tops of



Front and Rear Views of Caboose Model

the other upright pieces of wire. Finally, after bringing it all the way across the tops of the uprights, bend it again and bring it down to insert in the opposite hole from the one you started. That is on the other side of the platform.

To make the ladder we need a small piece of wood 5/16" wide and about 6" long. Lay out on tin, two strips the shape of the sides of the ladder. The longest length of the ladder where the rungs go is 2¾" by 1/16". The curve at the top will be best determined by yourself. When you have the two strips cut, tack them on the sides of the 6" piece of wood you cut with the edges of the strips just level with the edge of the wood.

Now, starting from the bottom of the ladder, mark off across the wood seven lines 5/16" apart. Cut seven pieces of tin 1/16" by ⅜" and lay them on the lines you marked off. Solder these to the strips of tin running lengthwise along the wood. There is your ladder. Solder the ladder into place on the car. Insert your brake wheel, giving it a touch of solder.

Take two pieces of good bond paper. Give them a light coat of the paint you are going to use on the car. After this has dried lay the painted sheets on a drawing board with a carbon paper between them. Now draw a line 2 13/16" long at the bottom of the paper. Erect two vertical lines at the ends of the horizontal line, these lines to be 2½" high. Between vertical lines draw in the roof curvature.

Lay out the door and the windows with India ink. Cut out the windows and paste in tracing paper behind them. Glue the papers onto the ends of the car. For the steps lay out eight pieces ¼" wide at the bottom by 11/16" high and ⅝" wide at the top. These pieces form your sides for the steps. For the steps themselves you need eight pieces ¾" long.

Enlarge the windows on the sides of the car to ¾" wide by ⅞" long. From the coffee can cut a strip 3/32" by 7⅞". From this strip cut four pieces, each 13/16" long. These will form the upper part of the trim for the windows. You will need another piece 3¼" long to form the bottom of the trim. This strip should be cut into four pieces, each 15/16" long. Sweat-solder these pieces into place and back the window with pieces of drawing-paper upon which you have drawn in lines with India ink to represent panes.

Paint the caboose whatever color you desire. Red, of course, is the favorite. Place under her trucks similar to those described last month, and she is ready to roll.

Model Engineers and Clubs

THIS model of a Penna. passenger coach (see photo) was made from wood and type metal. First I made the sides. Then I fashioned the belt of a separate piece glued on a panel and beveled to the correct shape. All window posts are separate sticks of wood glued to the belt and top stringer. The top stringer was in turn glued to the name board.

The windows consist of heavy photo film held in place by small cleats on the inside of the window posts. Car ends were made of one piece of wood with the windows and doors cut out. The door proper was glued to the inside of the car and set back to make a more realistic job.

The roof is composed of 7 pieces of wood, not counting the aprons and battens on the ends. The 2 side pieces of the roof proper were cut to size and then steamed and placed in a form to shape. The sides of the window pieces in the clear story (by " clear story " is meant the small line of windows at the top of the roof) were cut to shape and notched slightly over the ends of the car. Windows in the clear story are imitation and embossed on the wood.

Where the clear story blends with the roof proper a solid piece of wood was used. This piece of wood started from the downward bend of clear story and went to the end of the car. It was carved to shape, with a recess on each side to take care of the window pieces. The clear story roof was steamed to fit. It rests on the ends of the car and windows.

Sides of the main roof were glued and pinned into place on top of the name board. The aprons were glued to the name board. I used a small half-round batten to cover the joints where the aprons joined the car. Platforms were made of pine wood which I scored to look like wood planks. These platforms are supported by 4 small stringers glued to the underside of the car. The stringer pieces were notched to admit the bumper beam at each end of the car.

Handrails were made of ordinary copper wire (sometimes called bell wire) hammered flat and then filed to shape. Steps were cut from a single coffee tin and bent to shape. I used a touch of solder on the back side to strengthen them. The trucks were made from type metal or die-cast metal. Patterns were made which closely copied the original of that period. The bolster bar also was cast in metal and attached to the frames with 2 escutcheon pins just above the coil springs on the trucks.

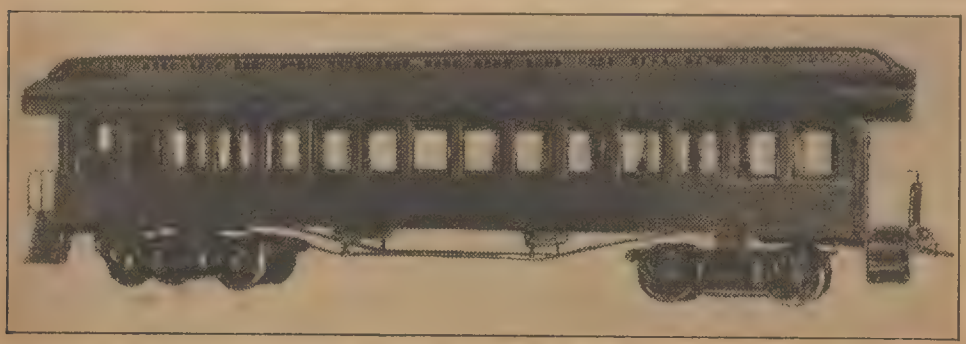
The car was painted red, 2 coats being used, with yellow lettering. Embossed windows in the clear story are painted the same yellow. After this had dried I varnished the whole car. —F. S. Wyman, 28 Plympton St., Waltham, Mass.

* * *

Both Trestle and Roadbed Look Like the Real Thing on the Model Pike of A. R. Hornor, Ahwahnee, Calif.

WHILE visiting Crystal Beach, Ont., Canada, about 16 years ago, Mrs. Stevenson saw a miniature pike in operation and visioned one for Waterworks Park, London, Ont. Her dream came true. The railroad was built. It has a 4-4-0 loco. made in Niagara Falls. The engine is steam-operated, with 3½-in. cylinders; it develops 7 h.p. Boiler is made of ¼-inch plate, 120 lbs. pressure and equipped with 2 Penberthy ¼-in. injectors. Its fuel is chestnut anthracite.

The boiler is built so it may burn soft coal, but Mrs. Stevenson considers this too dirty for



Model of Pennsylvania Passenger Coach Made of Wood and Type Metal by F. S. Wyman

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a pleasure-riding road. Headlight is a carbide bicycle lamp. Track is about ½ mile long, with a grade crossing, station and roundhouse. The locomotive can haul 3 cars containing about 36 children. It cost, with the track and labor, about $6.000 to build.—N. Woods, 22 Grant St., Brantford, Ont., Canada.

* * *

FELLOWS wanting to build 4-mm. layout and swap ideas, write to C. Schwarzkopf, 1728 W. Tioga St., Philadelphia, Pa.

* * *

I AM building ¼-in. scale model of a Milwaukee steam loco.—John Mate, 411 W. Walnut St., Kalamazoo, Mich.

* * *

JUNE issue contained the most practical model article you've published in a long time. I've made several rails accordingly and find them satisfactory, especially since they cost nothing but empty coffee cans.—B. Nichols, 13809 Orinoco Ave., E. Cleveland, O.

* * *

I HAVE the material, experience and information necessary to form a model railroad club. New Yorkers who are interested, please write.—Bernard Blatt, 1362 College Ave., N. Y. City.

* * *

SOUTH JERSEY Model R. R. Club meets every Monday night at 100 Ardmore Ave., Westmont, N. J. We have 9 pieces of rolling stock and are constructing others and adding more track.—E. L. Pardee, 626 Park Ave., Collingswood, N. J.

* * *

PACIFIC Model Railway Co., will exchange passes with anyone.—Send stamped, addressed envelope to M. Ovitt, 331 S. Palomares, Pomona, Calif.

* * *

HARRISONBURG Model R. R. Society recently visited the Baltimore Society. The trip was sponsored by D. W. Thomas, Gen. Mgr. of Chesapeake Ry. The party went to Halethorpe, Md., as guests of B. & O., viewing old-time railroad exhibits there. Then they proceeded to Baltimore to see the ¼-in. scale system of the Baltimore Society.—Grattan Price, Harrisonburg, Pa.

* * *

PHILADELPHIA Society of Model Engineers has ¼-in. scale layout with about 200 ft. of track, 100 of which is sidings, switches, etc. They also have a ½ and ¾-in scale live steam department.—G. Yocum, 2716 S. Iseminger, Philadelphia, Pa.

* * *

HARTFORD Society of Model Ry. Engineers meets 1st and 3rd Tuesdays each month in the former Central New England station. Their ¼-in. scale New Haven R. R. layout is being constructed rapidly. Visitors invited.—E. Abbe, 510 Church St., Hartford, Conn.

* * *

TINPLATERS who wish to form a model club write to Ivan Shank, 1458 29th Ave., San Francisco, Calif., or Paul Rolff, 100 Rogers Ave., Brooklyn, N. Y.

* * *

BROOKLYN, R. R. Club shut down for the summer but is now engaged in fall activities.—H. Saler, pres., 338 74th St., Brooklyn, N. Y.

* * *

CHICAGO Model R. R. Club has been dissolved.—Jas. Danly, Empire, Mich.

* * *

WE are glad to publish snapshots of models which show details very clearly. Do not send photos that are tiny or blurred, or with wheels buried in shadow.

* * *

IF you write to any of the names listed here, use a 2c. reply postal card or enclose a stamped envelope. Many persons refuse to answer readers who neglect this courtesy.

* * *

SEVERAL fans have written in asking for a model page expressly for beginners. What do YOU think?

* * *

OUR subject for next month's model article is the interurban gas-electric car. In Jan. issue (out Dec. 1) we will tell you how to lay out a miniature railroad of unusual interest under your Christmas tree. In future issues we will take up layouts, scenery and accessories.

The Model Trading Post

ITEMS are printed free in this department. Write plainly. We are not responsible for mistakes due to careless writing. Letters for January issue must be received before Oct. 15.

* * *

NOBODY, so far as we know, will give good tinplate equipment in exchange for non-railroad magazines or boys' books. Please don't ask us to print any more such items.

* * *

I HAVE New Zealand rabbits, 5-tube radio and books on railroading to trade for scale pass. and frt. cars, also locos.—R. Roedema, 58 N. 14th St., Hawthorne, N. J.

* * *

WANTED: Old copies of "Railroad Stories," Lionel Mag., strd.-gage loco. and cars. Will give other books or cash.—Chas. Vallette, 1906-A Penfield St., Philadelphia, Pa.

* * *

WILL trade my strd.-gage equipt. for O-gage equipt. or my boy's books for O-gage rolling stock.—M. Shallenberger, 808 8th St., Fargo, N. D.

* * *

WHO has 13 Lionel O-gage automatic couplers to trade for my A.F. fasten-in couplers?—E. Swanson, Jr., Axtell, Kan.

* * *

WHAT offers for ¾-in. scale patterns, castings and casting outfit?—G. West, 2145 Brick Ave., Scranton, Pa.

* * *

DESIRED: 1930 Loco. Cyclopedia. Ives O-gage loco. No. 1122. Have ½-in. scale loco. cab, drawings, Buddy L loco. superstructure.—L. Haug, 3207 Adeline St., Berkeley, Calif.

* * *

WILL trade my A.F. train "The Ambassador," complete with track, for what have you. —B. Joste, Jr., Cuba, Mo.

* * *

I HAVE Lionel, Ives, A.F. strd. and O gage equipt. to trade for radio or chemical set.—J. Helland, 4546 E. Laurel Dr., Seattle, Wash.

* * *

WANTED: Buddy L equipt. Have windmills, O gage Lionel equipt., including M 10001 streamline, etc.—L. McClain, 1413 Fort St., Miles City, Mont.

* * *

I WILL trade my Lionel or A.F. equipt. for HO or OO gage. Write for list.—N. Rehfuss, 1739 N. 43rd St., Camden, N. J.

* * *

I HAVE A.F. train No. 617 to trade for Lionel train No. 259E.—J. Hylton, Jr., 317 Light St., Salisbury, Md.

* * *

WILL swap my Lionel single-track frt. cars, automatic couplers, 2 pr. double trucks for back issues "Railroad Stories."—H. Blackburn, Canton, S. D.

* * *

I HAVE Ives O gage loco. No. 1122 to trade for 4 Lionel switches Nos. 021, Ives, 45 degree crossover. Lionel trans.—P. Johns Balsam, 180 S. Oxford St., Brooklyn, N. Y.

* * *

WILL exchange telegraph key and sounder for Ives, Lionel, Dorfan 8-wheel frt. cars.—E. Sprangers, 2550 W. Seltzer St., Philadelphia, Pa.

* * *

WILL trade my O gage equipt. for ¼-in. scale. Have Lionel elec. loco., 3 cars, 4 frt., 32 pieces of track, 1 pr. switches, radio parts.—Chas. Krause, Box 217, Pinellas Park, Fla.

* * *

WHAT am I offered for A.F. locos. Nos. 1218, 3116, 3316, Ives No. 3254 frt. car, Lionel rolling stock, track, trans., switches?—R. Jordan, 1411 N. 27th, Waco, Tex.

* * *

WHO'LL give O gage equipt. in exchange for my science, short story magazines and Erector sets?—D. Olven, Box 17, Emerson, Neb.

* * *

WHAT offers for my Lionel strd.-gage equipt.? Have No. 390-E loco., switches, signals, etc.—S. Miller, 150 32nd Ave., San Francisco.

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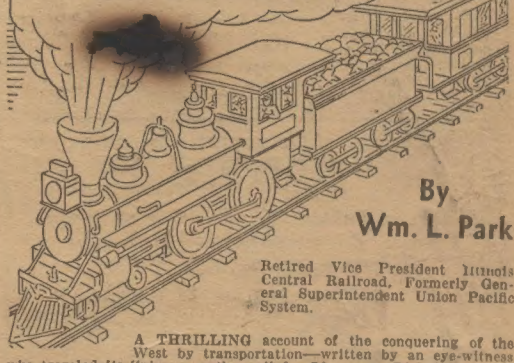

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I WANT Lionel loco. No. 259E or 262E.—J. Cady, 255 E. 9th St., So. Boston, Mass.

* * *

WILL trade 2 cameras and elec. loco. for steam type elec. loco. and 4-wheeled caboose.—J. Magee, 230 St. George St., Toronto, Canada.

* * *

WANTED: Lionel O gage, locos., track, equipt.—H. S. Mace, Ferrisburg, Vt.

* * *

I HAVE much O gage equipt., cars, engines, etc., to trade or sell for best offer.—K. Ducat, 1008 S. 28th St., Milwaukee, Wis.

* * *

MY Lionel Pullman, ob. car, 16 pieces of track, all strd. gage to trade or sell.—A. Franz, 2118 Lautner St., Pittsburgh, Pa.

* * *

I WILL trade boy's book, science magazines, etc., for O gage equipt.—R. Erickeson, 435 Underwood St., Rockford, Ill.

* * *

WANTED: Model lathe and drill press.—L. Richardson, 555 Shoop Ave., Dayton, O.

* * *

WHAT offers for my ¼-in. scale K4 loco., 2 I.C. box cars, 2 pr. machined scale 80-in. drivers, etc.—C. Morsch, Jr., 3402 Ave. P, Brooklyn, N. Y.

* * *

WILL trade model plane supplies, model making magazines for strd.-gage Lionel loco., motor, trucks.—A. Mattes, Creamery, Pa.

* * *

I HAVE a complete strd.-gage road to trade or sell, including signals, locos., switches, etc.—B. Elnger, 527 W. 157th St., N. Y. City.

* * *

WILL trade 75 issues of trapping, fishing, game magazines for 200 ft. of steel rail.—S. Trepcynski, Box 115, Housatonic, Mass.

* * *

I WANT 150 watt trans. Trade two D.C. 1-5 H.P. or 1-6 H.P. motors.—W. Sheehan, 166 Center St., Brooklyn, N. Y.

* * *

I NEED strd. Lionel equipt. I offer Erector sets, magazines, war photos of planes, guns, etc.—A. Dormio, 130 Mt. Pleasant St., Frostburg, Md.

* * *

WANTED: Lionel strd.-gage Nos. 516, 515 frt. cars in exchange for old copies of "Railroad Stories."—E. Abbott, 1145 Woodycrest Ave., Bronx, N. Y. City.

* * *

WILL swap my A.F. loco. No. 3116 and 5 Potomac cars for Ives Nos. 129 or 130 pass., frt. cars.—G. Condey, 5329 Skillman Ave., Woodside, L. I., N. Y.

But Pete is soon pimple-free and "out stepping"

HELLO, UNCLE JACK — WHAT ABOUT YOU AND AUNT MARGE AND ME SEEING A MOVIE TONIGHT?
SURE — IF YOU LIKE. I THOUGHT YOU'D BE STEPPING OUT WITH SUE, THOUGH!

NOT WITH THESE BRIGHT NEW BLOSSOMS ON MY FACE!!
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—clears the skin

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